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PERSONAL.

Mr. Thomas J. Peck has been elected City Engineer of Waycross, Ga.

Mr. H. K. Bishop has been appointed Superintendent of Public Works of Hudson, N. Y.

Mr. W. H. Wells has been appointed Chief Engineer of the Southern Ry. to succeed Mr. C. H. Hudson.

Mr. J. Frank Clark has been appointed Superintendent of the Water-Works and Fire Department of Big Rapids, Mich., to succeed Mr. Hiram E. Hardy, resigned.

Mr. Thos. F. Chappell has been appointed Chief Engineer of the Rutland R. R. Co. and the Ogdensburg & Lake Champlain Ry. Co., with office at Rutland, Vt.

Mr. F. B. Close, formerly Engineer of the Chicago Heights Land Association, has been appointed Engineer in Charge of the mining works of the Helvetia Copper Co., near Tucson, Ariz.

Mr. C. L. Le Boeuff has been appointed Superintendent of Streets and Mr. C. A. Hoffnagle, Superintendent of Water-Works, of Vergennes, Vt., and not of Burlington, as stated in our last issue.

Mr. E. Kuichling, Chief Engineer of the Water Department of Rochester, N. Y., delivered a lecture Wednesday, March 22, on "Riveted Steel Pipe," before the students of the Rensselaer Polytechnic Instutute, at Troy, N. Y.

Mr. O. G. Selden has resigned his position with James Stewart & Co. to become Southwestern Manager for the George A. Fuller Co., of Chicago. After April 1 Mr. Selden will have his headquarters in the Fullerton Bldg., in St. Louis, Mo.

Mr. Frank T. Oakley, Assoc. M. Am. Soc. C. E., Toledo, O., has opened an office for private practice at 824 Spitzer Building, in that city. Mr. Oakley has for the past four years been First Assistant and Bridge Engineer for the city of Toledo.

Mr. J. B. Seager, formerly General Manager of the Mackolite Fireproofing Co., of Chicago, has been appointed Manager of the Helvetia Copper Co., of Boston, which is about to undertake the development of copper mines 30 miles from Tucson, Ariz.

Mr. H. H. Johnson has been appointed City Engineer of Oregon City, Ore., and not of Portland, as incorrectly stated in a former issue. Mr. William B. Chase is City Engineer of Portland, and his term of office does not expire until July 1, 1900.

Mr. Saichiro Oi, Chief of the Telephone and Telegraph Department of the Japanese Government, arrived in New York city on March 18, and will spend some time in this country studying telephone and telegraph systems. Mr. Oi can be addressed in care of the Japan-American Association, Times Bldg., New York.

Dr. R. S. Tarr, Professor of Geology and Physical Geography in Cornell University, is engaged in a geological examination of the delta of the Mississippi River, giving especial attention to the Southwest Pass, for the improvement of which Congress has recently made large appropriations.

Mr. J. W. Fitzgibbon, Assistant Superintendent of the Motive Power and Equipment on the Chicago, Rock Island & Pacific Ry. lines west of the Missouri River, with headquarters at Horton, Kan., has accepted the position of Superintendent of Machinery of the Delaware, Lackawanna & Western R. R., with headquarters at Scranton, Pa.

Mr. C. M. Hobbs, Purchasing Agent of the Denver & Rio Grande R. R., will deliver a public lecture on "Switzerland vs. Colorado," at the Central Music Hall, Chicago, April 6. The lecture has been given in several of the large cities west of the Missouri River, and has proved of great interest. It will be illustrated by a number of stereopticon views of the mountain scenery of Switzerland and Colorado.

Mr. Geo. H. Benzenberg, M. Am. Soc. C. E., will retire from the office of City Engineer of Milwaukee, Wis., on April 17, 1899. Mr. Benzenberg began his connection with the engineering department of Milwaukee on April 17, 1874, when he was appointed Assistant City Engineer. He held this position until 1882, when he became City Engineer, to which office he has been appointed by each succeeding administration whether Democratic or Republican. During his connection with the city engineer's office he has inaugurated and designed practically the entire water-works, sewerage, street and viaduct systems of the city. Mr. Benzenberg announces his intention to take first a good long rest, after which he will probably devote his attention to consulting engineering practice.

Mr. Edwin G. Russell, Superintendent of the Rome, Watertown & Ogdensburg Division of the New York Central & Hudson River R. R., has accepted the position of Superintendent of the Morris and Essex division of the Delaware, Lackawanna & Western R. R., in place of Mr. Andrew Reasoner, resigned. Mr. Russell will be succeeded by Mr. Dewitt C. Moon, Superintendent of the Dunkirk, Allegheny Valley & Pittsburg Division of the New York Central & Hudson River R. R.

Mr. A. M. Kinsman, who has been Chief Engineer of the Wisconsin & Michigan R. R. for the past four years, has resigned to accept a position as Engineer of Construction of the Baltimore & Ohio R. R. lines west of the Ohio River, with headquarters at Zanesville, O. Previous to being Chief Engineer of the Wisconsin & Michigan R. R., Mr. Kinsman was connected with the Engineering Department of the Illinois Central R. R., for a period of over 15 years, and during that time had charge of most of the heavy construction on that line.

OBITUARY.

Maj. James M. Pollard, an expert on explosives, died at his home in Washington, D. C., on March 26.

Mr. Richard A. Tilghman, the inventor of the sand blast, died at Philadelphia, Pa., on March 24, at the age of 75 years.

Mr. Wallace B. Dildine, former Engineer for the Ohio State Canal Commission, died at Fostoria, O., March 21, aged 47 years.

Mr. William Eberhardt, Treasurer of the Fort Pitt Bridge Co., died at his home in Allegheny, Pa., on March 24, aged 55 years.

Mr. Alfred Soule, the builder of many electric railways in New England, died at his home at Cambridge, Mass., on March 11, aged 47 years.

Mr. James Cook Kingsley, son of the late Thomas Kingsley, one of the builders of the Brooklyn Bridge, died recently in San Salvador, where he was engaged in mining.

Herr Gustav Wiedemann died at Berlin, Germany, on March 24, aged 73 years. He was Professor of Physics and Chemistry in the University of Leipsic, and Editor of the "Annalen der Physik und Chemie."

Mr. William Allen Smith, M. Am. Inst. Mining Engrs., died at his home in New York city, on March 24, aged 51 years. He graduated from the Columbia School of Mines in 1868, and at the time of his death was associated with the Harvey Steel Co.

Mr. Frank Carter, a mining engineer of Pottsville, Pa., died on March 22, aged 65. In 1859 Mr. Carter laid out the town of Mahanoy City and later organized the Mahanoy City Water Co. At the time of his death he was connected with the Philadelphia & Reading Coal Co.

Dr. Oliver Marcy, Dean of Northwestern University, Evanston, Ill., died March 19. He was born at Coleraine, Mass., on Feb. 13, 1820, and graduated from the Wesleyan University at Middleton, Conn., in 1842. In 1849 he traveled across the continent to Puget Sound, to examine the geological conditions of the country, and then went to California to examine the geology of the new gold fields. He was a professor of Wilberham, Conn., until 1862, when he became Professor of Natural History at the Northwestern University, which had just been founded. In 1890 he was made Dean of the University.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

THE ENGINEERS' CLUB OF PHILADELPHIA.
April 1. "A Few Remarks on the Testing Laboratory of the City of Philadelphia," Richard L. Humphrey; "Notes on Recent Developments in Electrical Engineering," Carl Hering. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

ENGINEERS' CLUB OF ST. LOUIS.
April 3. Secy., E. R. Fish, 2401 N. Spring Ave., St. Louis, Mo.

CIVIL ENGINEERS' SOCIETY OF ST. PAUL.
April 3. Secy., C. L. Annan, City Engineer's Office, St. Paul, Minn.

ENGINEERING SOCIETY OF WESTERN NEW YORK.
April 3. Secy., H. J. March, Library Bldg., Buffalo, N. Y.

WESTERN SOCIETY OF ENGINEERS.
April 5. Secy., N. L. Litten, Monadnock Block, Chicago, Ill.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
April 5. Secy., C. W. Hunt, 220 W. 57th St., New York city.

FOUNDRYMEN'S ASSOCIATION (Philadelphia).
April 5. Secy., Howard Evans, Pier 45, N. Delaware Ave., Philadelphia, Pa.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES.
April 7. Secy., Henry I. Weed, Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
April 7. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

CHICAGO ELECTRICAL ASSOCIATION.
April 7. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.

MONTANA SOCIETY OF ENGINEERS.
April 8. Secy., A. S. Hovey, National Bank Bldg., Helena, Mont.

THE LOUISIANA ENGINEERING SOCIETY.
April 10. Secy., J. F. Coleman, 712 Union St., New Orleans, La.

ENGINEERS' CLUB OF KANSAS CITY.
April 10. Secy., F. W. Tuttle, Baird Bldg., Kansas City, Mo.

DENVER SOCIETY OF CIVIL ENGINEERS.
April 11. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Colo.

NORTHWEST RAILWAY CLUB.
April 11. Secy., T. A. Foque, Soo Line, Minneapolis, Minn.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
April 11. Secy., Wm. H. Searles, Case Library Bldg., Cleveland.

NEW ENGLAND RAILWAY CLUB.
April 11. Secy., Edw. L. Janes, P.O. Box 1158, Boston, Mass.

FRANKLIN INSTITUTE.
April 12. "Riddles Wrought in Iron and Steel," Paul Krenzpointner. Secy., Wm. H. Wahl, 15 South 7th St., Philadelphia, Pa.

AMERICAN INSTITUTE OF ARCHITECTS (New York Chapter).
April 12. Secy., Chas. I. Berg, 10 West 23d St., New York city.

AMERICAN RAILWAY ASSOCIATION.
April 12. Detroit, Mich. Secy., W. F. Allen, 24 Park Place.

CANADIAN SOCIETY OF CIVIL ENGINEERS.
April 13. Secy., H. C. McLeod, 112 Mansfield St., Montreal, Que.

BROOKLYN ENGINEERS' CLUB.
April 13. Secy., A. J. Provost, Jr., 191 Montague St., Brooklyn, N. Y.

ENGINEERING ASSOCIATION OF THE SOUTH.
April 13. Secy., H. M. Jones, 1000 Broad St., Nashville, Tenn.

ST. LOUIS RAILWAY CLUB.
April 14. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

WISCONSIN STATE CHEMICAL ASSOCIATION.
April 14. Secy., I. Ladoff, 154 Knapp St., Milwaukee, Wis.

ENGINEERS' CLUB OF COLUMBUS.
April 15. Secy., H. M. Gates, 12¼ North High St., Columbus, O.

TECHNICAL CLUB OF OMAHA.
April 17. Secy., J. Harry Lawrie, Omaha, Neb.

ENGINEERS' CLUB OF MINNEAPOLIS.
April 17. Secy., H. E. Smith, 1620 S. E. 14th St., Minneapolis, Minn.

ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE.
April 17. Secy., Marshall Morris, 16 Norton Bldg., Louisville, Ky.

WESTERN RAILWAY CLUB.
April 18. Secy., F. M. Whyte, 225 Dearborn St., Chicago, Ill.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA
April 18. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburg, Pa.

BOSTON SOCIETY OF CIVIL ENGINEERS.
April 19. Secy., S. E. Tinkham, City Hall, Boston, Mass.

WESTERN FOUNDRYMEN'S ASSOCIATION.
April 19. Secy., B. M. Gardner, 1522 Monadnock Block, Chicago, Ill.

ENGINEERS' CLUB OF CINCINNATI.
April 20. Secy., J. F. Wilson, P.O. Box 333, Cincinnati, O.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
April 20. Secy., F. A. Charpiot, P.O. Box 13, Savannah, Ga.

NEW YORK RAILROAD CLUB.
April 20. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.

ROCHESTER ENGINEERING SOCIETY.
April 21. Secy., John F. Skinner, Reynolds Library Bldg., Rochester, N. Y.

THE DETROIT ENGINEERING SOCIETY.
April 21. Secy., Henry Goldmark, Wayne Co. Savings Bank Bldg., Detroit, Mich.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS
April 26. Secy., Ralph W. Pope, 26 Cortlandt St., New York city.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.
May 9-12. Spring meeting, Washington, D. C. Secy., F. R. Hutton, 12 W. 31st St., New York city.

THE WORCESTER SOCIETY OF CIVIL ENGINEERS.—This society held its annual banquet at Worcester, Mass., on the evening of March 22. State Senator C. G. Washburn and Mr. Thomas C. Mendenhall, President of the Worcester Polytechnic Institute, delivered addresses.

IOWA TELEPHONE ASSOCIATION.—The 3d annual meeting of this association was held at Des Moines, Ia., on March 14. The officers elected for the ensuing year are as follows: Pres., Geo. M. Bamby, Perry, Ia.; Secy., J. W. Hill, Mutual Telephone Co., Des Moines; Treas., H. E. Teachout.

THE ENGINEERS' CLUB OF CINCINNATI.—At the regular monthly meeting of this club, held on March 16, Mr. James M. Harper read a paper entitled "The Liberty Street Tunnel and Sewer." This sewer was built in 1868-69 and specimens of stones taken from the inside were exhibited to show the wear resulting from 30 years' continual use.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.—At the last meeting of this society, held in New York city on March 22, Prof. M. I. Pupin presented a paper entitled "Propagation of Long Electrical Waves," in which a new experimental method of investigating this subject was described and a mathematical theory bearing upon the same was discussed.

NEW YORK ELECTRICAL SOCIETY.—A meeting of this society was held at Columbia University on March 9. Mr. W. J. Jenks presented an illustrated lecture on "Modern Research into Lightning Phenomena and Building Protection." Mr. A. J. Wurts also addressed the society, his subject being entitled "Original Investigation into Protection of Electrical Circuits from Lightning."

OHIO TELEPHONE ASSOCIATION.—The annual meeting of this association was held at the Hollenden Hotel, Cleveland, O., on March 15. The following officers were elected for the ensuing year: Pres., Hon. J. M. Thomas, Chillicothe; First Vice-Pres., Kora F. Briggs, Tiffin; Second Vice-Pres., Edward Kibler, Newark; Third Vice-Pres., A. A. Whitney, Mt. Gilead; Secy. and Treas., H. D. Critchfield, Mt. Vernon; Executive Council: E. L. Barber, J. B. Hoge, D. J. Cable, W. H. Butler, H. J. Barnes, A. R. Warner and Thos. Fricker.

OHIO GAS LIGHT ASSOCIATION.—The 15th annual convention of this association was held at Springfield, O., on March 15. The program included the following papers: "Some Notes on the Construction of a Concrete Gas Holder Tank," C. W. Andrews; "Welsbach Street Light-

ing," J. W. R. Cline; "Distribution Records—Their Uses and Preservation," J. A. Mayers; "By-Product Coke Ovens," E. E. Eysenbach; "A Bunch of Short Topics," H. L. Doherty. The convention lasted two days and was attended by about 200 delegates and visitors.

IRON AND STEEL INSTITUTE, GREAT BRITAIN.—The annual meeting of this association will be held at the house of the Institution of Civil Engineers at London, England, on May 4-5. At this meeting the council will present its report for 1898. The President-elect, Sir William Roberts-Austen, K. C. B., will deliver his inaugural address, and papers promised by Prof. J. O. Arnold, Sheffield; Mr. H. Bauerman, London; Mr. E. Disdier, Bilbao; Messrs. Jeremiah and A. P. Head, London; Baron H. von Juptner, Donawitz, Austria; Prof. H. Louis, Newcastle-upon-Tyne; Mr. Bertrand S. Summers, Chicago, and Prof. Wiborgh, Stockholm, are expected to be read and discussed. Bennett H. Brough, Secy.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.—The monthly meeting of this society was held in the Society's house, Pittsburg, Pa., on March 21.

The Committee on the Abatement of Smoke reported that they had been requested by the Public Works Department of Pittsburg to establish a rating of boilers of different types, and with different furnaces and settings, which the city could adopt with a view to putting an end to the installation of plants so inferior in capacity that they could not be worked without producing smoke.

The paper of the evening was read by Mr. C. B. Albree, on "Ornamental Iron Work." A number of specimens of work done in America and elsewhere and also several hundred illustrations were shown. The lecturer pointed out that a great deal of the best work was now made in Germany, but there was no reason why it could not be done here. The different methods of producing this kind of work were illustrated.

THE ENGINEERS' CLUB OF PHILADELPHIA.—At the last regular meeting of this club, held on March 18, Prof. J. B. Johnson presented a paper entitled "The Fruits of Sanitary Science." Prof. Johnson considered that modern sanitation may be said to date from 1863, when the English poor law commissioners instituted an inquiry into the health of towns. The first of the State Boards of Health in this country was organized in Massachusetts in 1869. The true cause of infectious diseases (from which about 40% of all deaths are due) is now acknowledged to be the taking into the human system some of the various kinds of injurious micro-organisms known as bacteria, carried either in the air or in food and drink. The methods of destroying these germs in food were considered and the statement was made that heating to the boiling point will certainly destroy all forms of bacteria. All surface waters contain injurious bacteria, which can be removed by filtration through fine sand, on the surface of which the microscopic growths collect and form a gelatinous covering which arrests the bacteria. The saving in the reduction of typhoid fever by the use of such filters is about 17 times their cost. Figures obtained at different localities were given in support of the above statement. The method of preventing the pollution of streams by filtering the sewage which enters into them was explained, and it was stated that modern sanitary science has given us the means of obtaining this most important element of life—a pure supply of drinking water. The importance of proper ventilation and cleaning of the rooms occupied by large numbers of people was dwelt upon, and attention was called to the recent progress made in the discovery of antidotes for the poisonous fluids engendered in the system by the microbes of disease. While sanitary science is still very young, it has already shown us the cause of those diseases from which two of every five persons die, and how to avoid such fatalities.

A special meeting of the club was held on the evening of March 25 to consider the question of the water supply of Philadelphia. After a lively discussion, in which the criminal negligence of the city councils in not providing for a pure water supply was pointed out, the following resolutions were unanimously adopted:

That in the judgment of the Engineers' Club of Philadelphia city councils should take such immediate action as will secure the following results:

(1) The placing of our present water supply beyond impairment.

(2) That the undue waste of our water supply should be prevented.

(3) That the initiation of the purification of our present water supply should be at once undertaken under the ownership and control of the city.

(4) That the detailed methods for securing the physical results should be assumed by the executive department of the city government.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened.	Work. Place.	See Eng. News.
Mar. 30.	School building, Brooklyn, N. Y.	Mar. 23
Mar. 30.	Highway bridges (3), Urbana, Ill.	Mar. 23
Mar. 30.	Asphalt paving, Reading, Pa.	Mar. 23
Mar. 30.	Garbage disposal, Providence, R. I.	Mar. 16
Mar. 30.	Public building work, San Francisco, Cal.	Mar. 2
	Advertised, Eng. News, Mar. 2 and 9.	
Mar. 31.	Electric plant, Springfield, N. S.	Mar. 9
Mar. 31.	Telephone concessions, Shanghai, China.	Nov. 24
	Advertised, Eng. News, Nov. 17 to Dec. 8.	
Mar. 31.	Sewers, East Cleveland, O.	Mar. 16
Mar. 31.	Water pipe, etc. (460 tons), Minneapolis.	Mar. 16
Mar. 31.	Paving, Bellefontaine, O.	Mar. 16
Mar. 31.	Plans for sewer system, Aylmer, Que.	Mar. 23
Mar. 31.	Ventilating apparatus, New York	Mar. 30
Mar. 31.	Water-works castings, Boston, Mass.	Mar. 30
Mar. 31.	Paving blocks, etc., Boston, Mass.	Mar. 30
Apr. 1.	Bridge abutment, Eau Claire, Wis.	Mar. 30
Apr. 1.	Electric lighting, etc., Jackson, O.	Mar. 23
Apr. 1.	Pvg blocks, sewer castings, etc., Athens, Ga.	Mar. 23
Apr. 1.	Brick paving, Akron, O.	Mar. 23
Apr. 1.	Brick paving, Tiffin, O.	Mar. 23
Apr. 1.	Electric plant, Palo Alto, Cal.	Mar. 16
Apr. 1.	Court house addition, Louisville, Ky.	Mar. 16
Apr. 1.	Light house, Romer Shoal, N. Y. H.	Mar. 16
	Advertised, Eng. News, Mar. 16 and 23.	
Apr. 1.	Hydraulic dredge, Rock Island, Ill.	Mar. 9
	Advertised, Eng. News, Mar. 9 to 30.	
Apr. 1.	Brick and pipe sewers, etc., Havana, Ill.	Mar. 9
	Advertised, Engineering News, Mar. 9.	
Apr. 1.	Fire hydrants, Washington, D. C.	Mar. 9
	Advertised, Engineering News, Mar. 9.	
Apr. 1.	Water-works, Goldhill, Ore.	Mar. 9
Apr. 2.	Electric plant, etc., Keota, Ia.	Mar. 23
Apr. 2.	School building, Plattsburg, N. Y.	Mar. 30
Apr. 2.	School building, Spring Grove, Minn.	Mar. 30
Apr. 3.	Steel bridge, Mitchell, S. Dak.	Mar. 30
Apr. 3.	Bridge plans, etc., Aptos, Cal.	Mar. 30
Apr. 3.	Library building, Jersey City, N. J.	Mar. 30
Apr. 3.	Electric plant, Forsyth, Ga.	Mar. 30
Apr. 3.	Water-works, Baird, Tex.	Mar. 30
Apr. 3.	Water-works, Pleasanton, Cal.	Mar. 30
Apr. 3.	Water-works, Whittier, Cal.	Mar. 30
Apr. 3.	Bridge roadway, Boston, Mass.	Mar. 30
Apr. 3.	Drain, New Rochelle, N. Y.	Mar. 30
Apr. 3.	Repairing bdge approach, Ellensburg, Wash.	Mar. 23
Apr. 3.	Heating apparatus, Clifton Heights, Pa.	Mar. 23
Apr. 3.	Bridge work, Grand Forks, N. Dak.	Mar. 23
Apr. 3.	Brick paving (2 streets), Albany, N. Y.	Mar. 23
Apr. 3.	Jail, Alturas, Cal.	Mar. 23
Apr. 3.	Paving, Paterson, N. J.	Mar. 23
	Advertised, Eng. News, Mar. 23 and 30.	
Apr. 3.	Brick paving, Union City, Pa.	Mar. 23
Apr. 3.	School building, Wells, Minn.	Mar. 9
Apr. 3.	Pumps (2), Winnipeg, Man.	Feb. 9
Apr. 3.	Market plans, Toronto, Ont.	Mar. 2
Apr. 3.	Brick and pipe sewers, Whiting, Ind.	Mar. 16
Apr. 3.	Pipe sewers, Plainfield, N. J.	Mar. 16
	Advertised, Engineering News, Mar. 16.	
Apr. 3.	Bridge, Kalama, Wash.	Mar. 16
Apr. 3.	Steam launch, Boston, Mass.	Mar. 16
Apr. 4.	Electric railway, Madrid, Spain.	Mar. 2
Apr. 4.	Electric plant, New York, N. Y.	Mar. 9
Apr. 4.	City prison work, New York, N. Y.	Mar. 9
Apr. 4.	Electric plant, Picton, Ont.	Mar. 16
Apr. 4.	Pratt truss bridge, Sidney, O.	Mar. 23
Apr. 4.	Stand-pipe, and water pipe, Berea, O.	Mar. 23
Apr. 4.	Street surfacing, Clinton, Mass.	Mar. 23
	Advertised, Eng. News, Mar. 23 and 30.	
Apr. 4.	Grubbing, excavating, etc., Clinton, Mass.	Mar. 23
	Advertised, Eng. News, Mar. 23 and 30.	
Apr. 4.	Road machines (6), Colfax, Wash.	Mar. 23
Apr. 4.	School building, Ellsworth, Minn.	Mar. 23
Apr. 4.	School building, Irvington, N. J.	Mar. 23
Apr. 4.	Bolts, nuts, boilers, etc., New York	Mar. 23
Apr. 4.	Railway grading, Clinton, Mass.	Mar. 23
	Advertised, Eng. News, Mar. 23 and 30.	
Apr. 4.	Iron or steel bridge, Somerville, N. J.	Mar. 30
Apr. 4.	Sewer and paving, Jersey City, N. J.	Mar. 30
Apr. 4.	Water mains and sewers, Verdun, Que.	Mar. 30
Apr. 4.	Pipe sewers, East Liverpool, O.	Mar. 30
Apr. 4.	Water mains and sewers, Albany, N. Y.	Mar. 30
Apr. 4.	Water-works, Monessen, Pa.	Mar. 30
Apr. 4.	Water meters, Victoria, B. C.	Mar. 30
Apr. 4.	Sewer bonds, Houston, Tex.	Mar. 30
Apr. 4.	Paving, flagging, etc., New York	Mar. 30
Apr. 4.	Improving alleys, Marion, Ind.	Mar. 30
Apr. 5.	Macadam paving, Trenton, N. J.	Mar. 23
Apr. 5.	School building, Waterbury, Conn.	Mar. 30
Apr. 5.	School building, Cohoes, N. Y.	Mar. 23
Apr. 5.	Hospital building plans, Auburn, Cal.	Mar. 23
Apr. 5.	Plans for steel cells, Auburn, Cal.	Mar. 23
Apr. 5.	Steel and wooden bridges, Dakotah, Ia.	Mar. 23
Apr. 5.	Bridge, Goldbeach, Ore.	Mar. 23
Apr. 5.	Water-works, etc., Mayville, N. Dak.	Mar. 23
Apr. 5.	Electric plant, Mayville, N. Dak.	Mar. 23
Apr. 5.	Boiler (300-HP.), Newport, Ky.	Mar. 23
Apr. 5.	Excavating, Vicksburg, Miss.	Mar. 9
	Advertised, Eng. News, Mar. 9 to 30.	
Apr. 5.	Steel bridge, Columbus, O.	Mar. 16
Apr. 5.	Asphalt plant and wagons, Winnipeg	Mar. 16
Apr. 5.	Combination bridge, New Whatcom, Wash.	Mar. 30
Apr. 5.	Electric machinery, etc., Indianapolis, Ind.	Mar. 30
Apr. 5.	Stand-pipe, Elizabethtown, Ky.	Mar. 30
Apr. 5.	Sewers and paving, Buffalo, N. Y.	Mar. 30
Apr. 6.	School building, New York, N. Y.	Mar. 30
Apr. 6.	Trap-rock screenings, New York, N. Y.	Mar. 30
Apr. 6.	Water pipe, Yonkers, N. Y.	Mar. 30
Apr. 6.	Submerged sewer, New London, Conn.	Mar. 16
	Advertised, Engineering News, Mar. 16.	
Apr. 6.	County roads, Ukiah, Cal.	Mar. 16
Apr. 6.	Pipe sewers, New London, Conn.	Mar. 16
	Advertised, Engineering News, Mar. 16.	
Apr. 6.	Dredging boat, Sabine Pass, Tex.	Feb. 9
Apr. 6.	Culvert and cem., Pittsburg Landing, Tenn.	Mar. 23
Apr. 6.	Street railway, Cleves, O.	Mar. 23
Apr. 7.	Street sprinkling, St. Louis, Mo.	Mar. 23
Apr. 7.	Water pipe, etc., Austin, Minn.	Mar. 23
	Advertised, Engineering News, Mar. 23.	
Apr. 7.	Improving 25 alleys, St. Louis, Mo.	Mar. 23
Apr. 7.	Ditch and bridge bonds, Bellefontaine, O.	Mar. 16
Apr. 7.	Bridge at Center St., Cleveland, O.	Mar. 16
Apr. 7.	Iron bridges, Iowa City, Ia.	Mar. 30
Apr. 7.	Masonry work, Providence, R. I.	Mar. 30
	Advertised, Engineering News, Mar. 30.	
Apr. 7.	Water pipe Chicago, Ill.	Mar. 30
Apr. 8.	Bridge abutments, Chatham, Ont.	Mar. 30
Apr. 8.	Gas and electric lighting, Brockton, Mass.	Mar. 30
Apr. 8.	Sewers, Washington, D. C.	Mar. 30
Apr. 8.	Water pipe, etc., Butte, Mont.	Mar. 16
	Advertised, Engineering News, Mar. 16.	
Apr. 8.	Valves, castings, etc., Butte, Mont.	Mar. 16
	Advertised, Engineering News, Mar. 16.	
Apr. 8.	Extending electric plant, Norfolk, Va.	Mar. 16
Apr. 8.	Artesian well, Fort McPherson, Ga.	Mar. 16
Apr. 8.	Water bonds, Mankato, Kan.	Mar. 23
Apr. 8.	Extending tunnel, etc., Ontario, Cal.	Mar. 23
Apr. 8.	Street railway, Home City, O.	Mar. 23
Apr. 8.	Sidewalks, etc., Youngstown, O.	Mar. 23
Apr. 10.	Bonds, Salem, O.	Mar. 23
Apr. 10.	Cement sidewalks, Crawfordsville, Ind.	Mar. 23
Apr. 10.	Gravel roads, Bedford, Ind.	Mar. 23
Apr. 10.	Asphalt paving, Lafayette, Ind.	Mar. 23
Apr. 10.	Brick paving, etc., Des Moines, Ia.	Mar. 23
Apr. 10.	Bridges (2), Chicago, Ill.	Feb. 23
	Advertised, Engineering News, Feb. 23.	
Apr. 10.	Ditch, piling and rip-rap, Fremont, Neb.	Mar. 2
Apr. 10.	Arc lights, Dayton, O.	Mar. 2
	Advertised, Eng. News, Mar. 2 and 9.	
Apr. 10.	Boilers for w.-wks (4), Montgomery, Ala.	Mar. 16
	Advertised, Eng. News, Mar. 16 to Apr. 6.	
Apr. 10.	Water tank, Fort Mojave, Ariz.	Mar. 16
Apr. 10.	Sewerage system, Concord, Mass.	Mar. 30
	Advertised, Engineering News, Mar. 30.	
Apr. 10.	Bridge approach bonds, Nashville, Tenn.	Mar. 30
Apr. 10.	Bridge metal tubes, Crescent City, Ill.	Mar. 30
Apr. 10.	Street cleaning, etc., Washington, D.C.	Mar. 30
	Advertised, Eng. News, Mar. 30 and Apr. 6.	
Apr. 10.	Public school building, Brooklyn, N. Y.	Mar. 30
Apr. 10.	Trestle bridge, Oakland, Cal.	Mar. 30
Apr. 10.	Street sprinkling, Washington, D. C.	Mar. 30
	Advertised, Eng. News, Mar. 30 and Apr. 6.	
Apr. 10.	Macadam paving, Morristown, N. J.	Mar. 30
Apr. 10.	Brick paving, South Bend, Ind.	Mar. 30
Apr. 10.	Asphalt paving, Wabash, Ind.	Mar. 30
Apr. 11.	Steam tug, New York, N. Y.	Mar. 30
Apr. 11.	Pumping engines (2), Philadelphia, Pa.	Mar. 9
Apr. 11.	Paving, etc., Huntington, Ind.	Mar. 9
Apr. 11.	Brick paving, Schenectady, N. Y.	Mar. 23
Apr. 11.	Jail cells, Anaconda, Mont.	Mar. 23
Apr. 12.	Paving, Salem, O.	Mar. 23
Apr. 12.	Water-works, Mankato, Kan.	Mar. 23
Apr. 12.	Maps and plats, Pomeroy, O.	Mar. 23
Apr. 12.	Dam and weirs, Cincinnati, O.	Mar. 9
	Advertised, Eng. News, Mar. 16 to Apr. 6.	Mar. 16
Apr. 12.	Additions water-works, Seattle, Wash.	Mar. 16
	Advertised, Eng. News, Mar. 16 and 23.	
Apr. 12.	Brick and iron sewers, etc., Jersey City.	Mar. 30
Apr. 12.	Steel bridge, Batavia, O.	Mar. 30
Apr. 12.	Iron wire (1,000 miles), Washington, D.C.	Mar. 30
Apr. 12.	Water pipe, Canton, N. Y.	Mar. 30
Apr. 13.	Steel highway bridge, Providence, R. I.	Mar. 30
	Advertised, Eng. News, Mar. 30 and Apr. 6.	
Apr. 13.	Steam heating, Athens, W. Va.	Mar. 30
Apr. 13.	Steam heating, Fairmount, W. Va.	Mar. 30
Apr. 13.	Lock house, Kanawha City, W. Va.	Mar. 30
Apr. 13.	Repairing dredge, Charleston, S. C.	Mar. 30
Apr. 13.	Roads (67 miles), Crown Point, Ind.	Mar. 30
	Advertised, Engineering News, Mar. 30.	
Apr. 13.	Steam heating plant, Grand Junction, Colo.	Mar. 23
Apr. 13.	Steam heating, St. Paul, Minn.	Mar. 23
	Advertised, Eng. News, Mar. 23 and 30.	
Apr. 13.	Hydraulic canal, Great Bend, N. Y.	Mar. 23
	Advertised, Eng. News, Mar. 23 and 30.	
Apr. 14.	Brick paving, etc., Waukesha, Wis.	Mar. 23
	Advertised, Eng. News, Mar. 23 and 30.	
Apr. 14.	Heating, etc., Louisville, Ky.	Mar. 16
Apr. 14.	Hall building, Bradford, England.	Jan. 19
Apr. 14.	Brick and steel sewers, Ottawa, Ont.	Mar. 30
Apr. 15.	Paving (14,800 yds.), Petersburg, Va.	Mar. 30
	Advertised, Engineering News, Mar. 30.	
Apr. 15.	Hospital buildings, Harrisburg, Pa.	Mar. 30
Apr. 15.	Apartment building, Osage, Ia.	Mar. 30
Apr. 15.	Steel bridge & abutments, Gainesville, N. Y.	Mar. 30
Apr. 15.	Water-works, Tinley Park, Ill.	Mar. 30
Apr. 15.	Water-works, Hintonburg, Ont.	Mar. 30
	Advertised, Engineering News, Mar. 30.	
Apr. 15.	Paving and sewers, Goshen, Ind.	Mar. 30
Apr. 15.	Highway, Colden, N. Y.	Mar. 30
Apr. 15.	Brick paving, Shamokin, Pa	Mar. 30
Apr. 15.	Cotton mills, Greensboro, N. C.	Mar. 30
Apr. 15.	Sewer material, etc., Honolulu, H. I.	Feb. 23
	Advertised, Eng. News, Feb. 23 and Mar. 2.	
Apr. 15.	Hospital building, Birmingham, Ala.	Mar. 9
Apr. 15.	Water-works, Forestport, N. Y.	Mar. 9
Apr. 15.	Branch sewer, Sandusky, O.	Mar. 16
Apr. 15.	Sewers, etc., Carrollton, Mo.	Mar. 16
Apr. 15.	Water-works, Golden, Colo.	Mar. 16
Apr. 15.	Paving, etc., and bonds, Carrollton, Mo.	Mar. 16
Apr. 15.	Pumping engine, Montgomery, Ala.	Mar. 23
	Advertised, Eng. News, Mar. 23 to Apr. 13.	
Apr. 15.	Paving, Akron, O.	Mar. 23
Apr. 15.	Bridge, Hartford, Conn.	Mar. 23
	Advertised, Eng. News, Mar. 23 and 30.	
Apr. 15.	Ditch (30,000 cu.yds.), Wapakoneta, O.	Mar. 23
Apr. 17.	Garbage crematory, Louisville, Ky.	Mar. 23
Apr. 17.	Water-works, Lakeport, Cal.	Mar. 23
	Advertised, Engineering News, Mar. 23.	
Apr. 17.	Electric light franchise, Napa, Cal.	Mar. 23
Apr. 17.	Paving, Bridgeport, O.	Mar. 23
Apr. 17.	Brick paving, Toledo, O.	Mar. 23
Apr. 17.	Macadam roads, Risingsun, Ind.	Mar. 23
Apr. 17.	Brick paving, Portland, Ind.	Mar. 23
Apr. 17.	Cement, stone, etc., Marquette, Mich.	Mar. 23
	Advertised, Eng. News, Mar. 23 to Apr. 13.	
Apr. 17.	Levee (11 miles), West Memphis, Tenn.	Mar. 16
	Advertised, Eng. News, Mar. 16 to Apr. 6.	
Apr. 17.	Public building work, San Francisco, Cal.	Mar. 16
Apr. 17.	Municipal building, North Braddock, Pa.	Mar. 30
Apr. 17.	Lumber, iron, etc., Portland, Me.	Mar. 30
Apr. 17.	Water and electric bonds, Monroe, La.	Mar. 30
Apr. 17.	Water mains, Goshen, Ind.	Mar. 30
Apr. 18.	School buildings, etc., San Carlos, Ariz.	Mar. 30
Apr. 18.	Trunk sewer, Bayonne, N. J.	Mar. 30
Apr. 18.	Sewers, etc., San Carlos Agency, Ariz.	Mar. 30
Apr. 18.	Arch culverts, Chicago, Ill.	Mar. 16
	Advertised, Eng. News, Mar. 16 to Apr. 6.	
Apr. 18.	Pipe culverts (9), Chicago, Ill.	Mar. 23
Apr. 19.	Court house plans, Nashua, N. H.	Mar. 30
Apr. 19.	Extending water-works, Butte, Mont.	Mar. 30
	Advertised, Eng. News, Mar. 16 and 30.	
Apr. 20.	Electric plant, Genoa, Neb.	Mar. 30
Apr. 20.	Air cylinders, etc., Montgomery, Ala.	Mar. 30
	Advertised, Eng. News, Mar. 30 to Apr. 20.	
Apr. 20.	Water-works, etc., Greenville, Cal.	Mar. 30
Apr. 20.	Excavating, New Orleans, La.	Mar. 23
Apr. 23.	Steel bridge, Raleigh, N. C.	Mar. 23
Apr. 24.	Dredging harbor, New York, N. Y.	Mar. 30
	Advertised, Eng. News, Mar. 30 to Apr. 20.	
Apr. 25.	Park bonds, Cleveland, O.	Mar. 23
Apr. 26.	Dormitory buildings, Poplar, Mont.	Mar. 30
Apr. 26.	Dredging two channels, New York	Mar. 30
	Advertised, Eng. News, Mar. 30 to Apr. 20.	
Apr. 26.	Water-works, etc., Fort Peck, Mont.	Mar. 30
Apr. 26.	Dredging harbor, Cleveland, O.	Mar. 30
	Advertised, Eng. News, Mar. 30 and Apr. 6.	
Apr. 27.	Pier of aqueduct bridge, Georgetown, D.C.	Mar. 30
	Advertised, Eng. News, Mar. 30 to Apr. 20.	
Apr. 28.	Broken stone, New York, N. Y.	Mar. 30
	Advertised, Eng. News, Mar. 30 to Apr. 20.	
Apr. 28.	Reservoir, Cincinnati, O.	Mar. 30
	Advertised, Eng. News, Mar. 30 to Apr. 27.	
Apr. 28.	Water mains, Cincinnati, O.	Mar. 30
	Advertised, Eng. News, Mar. 30 to Apr. 27.	
Apr. 29.	Building plans, New Haven, Conn.	Mar. 23
May 1.	Bonds, Cobourg, Ont.	Mar. 30
May 1.	Electric and water plant, Cullman, Ala.	Mar. 30
May 3.	Sewerage system, Sauk Centre, Minn.	Mar. 30
	Advertised, Eng. News, Mar. 30 and Apr. 6.	
May 15.	Sewers, Medford, Ore.	Mar. 30
May 25.	Sewer system, Johannesburg, S. Africa	Mar. 9
June 1.	Plans for market, Leeds, England	Feb. 16
June 30.	Electric r'y (23 miles), Shanghai, China	Mar. 2
	Advertised, Eng. News, Nov. 17 to Dec. 8.	
Oct. 1.	Electric street railway, Moscow, Russia	Mar. 9
No date.	Railway, Norfolk, Va.	Mar. 16
	Advertised, Eng. News, Mar. 16 and 23.	
"	Pumping plant, Orange, N. J.	Mar. 16
	Advertised, Eng. News, Mar. 16 and 23.	
"	Electric plant, etc., Orange, N. J.	Mar. 16
	Advertised, Eng. News, Mar. 16 and 23.	
"	Excavating, Harvey, Ill.	Mar. 9
	Advertised, Eng. News, Mar. 9 to 23.	
No date.	Civil engineer, Eau Claire, Wis.	Mar. 30
"	Quarrying, Spokane, Wash.	Mar. 30

RAILWAYS.

ATCHISON, TOPEKA & SANTA FE.—Reports state that bids have been received for the extension of the Whitewater branch of this system from San Jose to the iron mines near Hanover, a distance of more than six miles, and construction will begin at once. This extension will open extensive iron and copper lands owned or controlled by the Colorado Iron & Coal Co. J. Dun, Ch. Engr., Topeka, Kan.

BALTIMORE & OHIO.—Reports state that Bennett & Talbott, Greensburg, Pa., have been awarded the contract for the construction of White Hall tunnel, 1,700 ft. in length and two tracks wide, on the Wheeling division of this system, to cost about $500,000.

BAYFIELD HARBOR & GREAT WESTERN.—D. M. Sabin, Stillwater, Minn. is said to be making preliminary arrangements for letting a contract for the construction of 30 miles of new railway through the logging district of northern Wisconsin.

BROOKLYN & BRIGHTON BEACH.—Reports state that all the property of this company, except the station building at Sheepshead Bay, was sold under foreclosure, March 20, to the Brooklyn Rapid Transit Co., for $711,000. W. Finley, Gen. Supt., 468 Flatbush Ave., Brooklyn, N. Y.

CENTRALIA & CHESTER.—It is announced that this line, extending from Chester to Salem, Ill., 99 miles, will be offered for sale about April 1. C. M. Forman, Receiver, Sparta, Ill.

CENTRAL NEW ENGLAND.—C. H. Ewing, Ch. Engr., Hartford, Conn., informs us that work was started about one month ago and is being pushed at several points along the line of extension from Tariffville, Conn., to Springfield, Mass., 15 miles. The bridge work was let to the Phoenix Bridge Co., Phoenixville, Pa., and the grading and masonry to Ryan & Kelly, 8 South Broad St., Philadelphia, Pa.

CENTRAL VERMONT.—Press reports state that this railway was sold at public auction at St. Albans, Vt., March 21, to Ezra H. Baker, Chn. of Bondholders Com., at $7,000,000.

CHATTAHOOCHEE & GULF.—This company has been incorporated in Alabama, with $1,000,000 capital stock, to build from the terminus of the Central of Georgia Ry. at Columbia to Flomaton, Ala., a distance of about 130 miles. The incorporators are: T. M. Cunningham, Jr., H. V. Jenkins, M. B. Lane and others, of Savannah, Ga.

CHICAGO GREAT WESTERN.—We are informed that the bulk of the improvements for this year will be the extension of passing tracks, relaying about 90 miles of track with 75-lb. rails 60 ft. long, ballasting about 200 miles of track, replacing 42 pile and trestle bridges with permanent structures, replacing 150 wooden culverts with stone culverts or cast-iron pipe, replacing six iron structures, aggregating 800 lin. ft., with heavier structures, and strengthening three structures aggregating 1,280 lin. ft., for the new heavy locomotives. It is also expected to extend four engine houses and construct five power coaling stations. H. Fernstrom, Ch. Engr., St. Paul, Minn.

CHICAGO & ALTON.—Specifications are being made, according to reports, for the reduction of the heavy grades on this line between Bloomington and Lincoln, Ill., about 30 miles. The purchase of new equipment is also said to be contemplated. H. C. Draper, Ch. Engr., Chicago, Ill.

CINCINNATI CONNECTING BELT.—Incorporated in Ohio, March 21, with a capital stock of $300,000, to build a steam belt line from Gilbert Ave. and Court St., Cincinnati, O., through Norwood, Bond Hill, Elmwood and Mount Healthy. J. G. Schmidlapp, Wm. C. Procter and T. D. Rhoads are incorporators.

CLEVELAND COTTON MILLS.—H. F. Schenck, Pres., Lawndale, N. C., informs us that this company contemplates the construction of nine miles of railway between Lawndale and Shelby, N. C. No surveys have yet been made, and no contracts will be let until after the surveys have been completed.

COLORADO VALLEY.—We are informed that this company, now in the hands of a receiver, has track laid on its proposed line from Sweetwater, Tex., five miles south. It has been located for 25 miles, and it is now intended to complete the surveys on to San Angelo, 75 miles south of Sweetwater. At the annual meeting on March 15 J. R. Daugherty was elected president and T. S. Foster, vice-president.

CUBA.—The United States Government, March 18, accepted the new line of railway between Trisconia and Matanzas, Cuba, about seven miles in length. The work was done by the Drake & Stratton Co., associated with the American Indies Co., of 100 Broadway, New York.

DARDANELLE & OLA.—Official reports state that surveys are being made and work is expected to begin about June 1 on this proposed line from Dardanelle to the Choctaw & Memphis Ry. at Ola, Ark., 18 miles. John H. Page, Pres.; C. B. Cotton, Vice-Pres., Dardanelle, Ark.

DENVER & COAL BELT.—This company was incorporated in Colorado, March 15, with $500,000 capital stock, to build a steam or electric railway from Denver to Boulder, via Lafayette and Erie, Colo., 40 miles. Surveys have been made, and the right of way secured, and the route is through a practically level country. The incorporators are: John C. Teller, Thos. L. Darby, F. I. Smith and others, of Denver, Colo.

EAST LOUISIANA.—W. W. Babington, P. B. Carter, S. P. Richardson and others, of Franklinton, La., have been appointed a committee to secure the extension of this railway from Covington to Franklinton, about 30 miles. John Poitevent, Pres., New Orleans, La.

ELIZABETH CITY & WESTERN.—Incorporated in North Carolina, with $100,000 capital stock, to build from Elizabeth City about 35 miles through Pasquotank, Perquimans and Gates counties. C. H. Robinson and W. W. Griggs are said to be incorporators.

GENESEE & WYOMING VALLEY.—Incorporated in New York, March 24, with $500,000 capital stock, with principal office at York, Livingston county, N. Y. Joseph N. Smith, Lynn, Mass.; David Hyman, Geneseo, N. Y., are directors.

INDIANAPOLIS & LOUISVILLE.—Incorporated in Indiana, March 20, with a capital stock of $100,000, to build a line from a point in or near Indianapolis, Ind., to the coal fields of Clay, Sullivan and Greene counties. The incorporators are: E. R. Thomas and Stewart M. Brice, New York; B. E. Taylor, Chicago, interested in the Chicago, Indianapolis & Louisville Ry.

IOWA, MINNESOTA & NORTHWESTERN.—The township of Blue Earth City, Minn., has voted a bonus of $10,000 to aid the construction of this line from Mason City, Ia., to Blue Earth City, via Fertile and Lake Mills, Ia., and Kiester, Seeley, Rome and Emerald, Minn. W. E. Brice, Mason City, Ia., is said to be interested.

JAPAN.—Consul Jas. W. Davidson, Tamsui, Formosa, reports that the Formosan government has asked the central Japanese government for an appropriation of $20,000,000 for the construction of a railway through the island, about 175 miles, and for the improvement of Kelung Harbor. H. Yamashita, Taipeh, Formosa, is said to desire information concerning railway supplies and equipment.

LEETONIA.—C. B. Farr, Pres., Williamsport, Pa., informs us that the surveys are nearly completed and the right of way obtained for this proposed line from Tiadaghton to Leetonia, eight miles. The capital has been secured, and the construction will be done by day's work, beginning April 1. H. B. Norton, Engr., Ridgway.

MANKATO & NEW ULM.—Surveys have been completed and contracts for grading will probably soon be let for constructing this extension of the Chicago & Northwestern Ry. from Mankato to New Ulm, Minn., 25¾ miles. A number of stone culverts will be required, but the grading will be light. L. P. Yale, Engr. in Charge, Mankato, Minn.

MILWAUKEE, NEILLSVILLE & LAKE SUPERIOR.—Reports from Milwaukee, Wis., state that Jas. L. Gates, who incorporated this company in 1895, has decided to build this summer from Superior to Neillsville, Wis., via Douglas, Bayfield, Sawyer, Chippewa and Clark counties.

MEXICO.—Press reports state that A. W. Lilendahl, Mexico City, has been granted a concession to build a line from Saltillo to Torreon, where it will connect with the Mexican International and the Mexican Central Rys. It is further stated that a subsidy of $750,000 has been granted by the Coahuila state government, and that work will begin soon.

NAZARETH & LEHIGH.—Conrad Miller, Pres., Bangor, Pa., informs us that this company merely intends to build one mile of line which will be absorbed by the Bangor & Portland Ry. Co. All work will be done by the company. Birge Pearson, Ch. Engr., Easton, Pa.

NORFOLK & WESTERN.—Chas. S. Churchill, Engr. Maintenance of Way, Roanoke, Va., writes us that Walton, Luck & Co., Falls Mills, Va., have the contract for all the grading, masonry and tunnel work on a new low-grade line at Radford, Va., to be 7.2 miles in length, as compared with the present main line of 11.5 miles. It is proposed to complete the work as soon as possible and to use the line primarily for handling freight. The Edge Moor Bridge Works, Wilmington, Del., have contract for all the iron superstructure, including a bridge over New River. The tunnel will probably be about 3,300 ft. long.

QUINCY & EASTERN.—Tere A. Clark, Quincy, Ill., is interested in the construction of this proposed line from Quincy easterly to Clayton, Camp Point, Rushville and Beardstown, Ill. Rights of way are now being secured.

ST. FRANCOIS VALLEY.—Official reports state that this company expects to construct a 35-mile extension of its line to Bloomfield, Mo., but that no arrangements have yet been made. E. F. Blomeyer, Pres.; Jas. F. Brooks, Ch. Engr., both of Cape Girardeau, Mo.

ST. LOUIS & SAN FRANCISCO.—Reports state that this company has decided to make extensive improvements on its line between Kansas City and Springfield, Mo., including the replacing of all old ties with new ones, the laying of a 70-lb. steel rail where light iron rails are found and the ballasting of the road with rock. B. F. Yoakum, Gen. Mgr., St. Louis, Mo.

SALISBURY & FAYETTEVILLE COAST LINE.—Incorporated to build from Salisbury to Fayetteville, N. C. F. H. Manney and Geo. Battleson are interested.

SNAKE RIVER VALLEY.—Official reports state that this line is now under construction for the Oregon R. R. & Navigation Co. from Wallula Junction to Grand City, Ore., 67 miles. The work is being done by different contractors in sections of from one to two miles in length, among whom are: Mendenhall & Deal, Springfield, Utah; G. H. Coykendall; Winters, Parsons & Boomer, Butte, Mont.; G. A. Anderson, E. C. Burlingame, Miller & Burbank, Mason & McBride, Thornton & Moran, Elliott, McDonald & Co., E. F. Mitchell, Jas. A. Caughren, S. W. Aldrich, R. J. Lizee, John Grant, Corey Bros. & Co. and Wolfe & Golden. W. H. Kennedy, Engr., Portland.

TEXAS CENTRAL.—C. Hamilton, Vice-Pres. and Gen. Mgr., Waco, Tex., is quoted as stating that this company had decided to extend 40 or 50 miles from Albany towards Las Vegas or Albuquerque, N. Mex., and that surveys were being made.

WASHINGTON, WESTMINSTER & GETTYSBURG.—Jas. B. Colegrove, Washington, D. C., informs us that he expects to let contracts before April 15 for constructing this proposed steam railway to Gettysburg, via Rockville, Damascus, Mount Airy and Westminster, 79 miles. The route has been surveyed three times. H. E. Lehman, Ch. Engr., 711 Walnut St., Philadelphia, Pa.

STREET AND ELECTRIC RAILWAYS.

SANFORD, ME.—Reports state that Straw, Waterhouse & Chandler, the Boston contractors who are building the Sanford & Cape Porpoise Electric Ry., are energetically pushing the construction work. The abutments for several bridges have been placed, poles are distributed between Sanford and Kennebunk and the driving of piles at Cape Porpoise will soon commence.

DERRY, N. H.—Wm. H. Anderson, Pres. of Derry & Pelham Electric Ry. Co., Lowell, Mass., informs us that the company has only been organized, and that no surveys have yet been made. Contracts will not be let until capital has been subscribed. The proposed route is from Derry to Pelham, via Londonderry and Windham, 15 miles.

NEWBURYPORT, MASS.—The Georgetown, Rowley & Ipswich St. Ry. Co., capitalized at $180,000, has asked for a franchise through this city. The company proposes to build 18 miles of line. C. E. Barnes, 53 State St., Boston, and E. B. Fuller, Haverhill, Mass., are incorporators.

WESTERLY, R. I.—The Sea View R. R. Co. has petitioned the council for a franchise to build an electric railway through this city. It contemplates the construction of 35 miles of track, using 64-lb. rails. The cars are to be made by the Jackson & Sharpe Co., Wilmington, Del., with 140-HP. motors on each car. Wm. C. Clarke, Pres., Westerly.

EAST LYME, CONN.—John F. Luce, East Lyme; Cyrus G. Beckwith, New London, Conn.; G. S. Davis, Niantic, and others are reported to be interested in the construction of the East Lyme St. Ry. from this village to Niantic, Crescent Beach and Oswegatchie.

MONTVILLE, CONN.—A. L. Potter & Co., Norwich, Conn., will be awarded the contract, according to reports, for furnishing 28,000 stringers and 600 trolley poles for the proposed Montville St. Ry. Co., work to begin when a formal order has been received from the superior court.

BROADALBIN, N. Y.—J. W. Cleveland, Ch. Engr., Broadalbin, informs us that the project to build an electric railway between Broadalbin and Saratoga, via Hagaman, Rockton and Amsterdam, 22 miles, is not yet far enough advanced for definite statement. It seems probable, however, that it will be built from Broadalbin to Amsterdam.

BROOKLYN, N. Y.—Reports state that the Brooklyn & Brighton Beach R. R., 15 miles in length, will be converted from a steam to an overhead trolley railway by its new owners, the Brooklyn Rapid Transit Co. C. L. Rossiter, Pres., 168 Montague St.——Work is about to begin towards equipping the Brooklyn Elevated R. R. with the third rail electric system, similar to that on the New York and Brooklyn Bridge; estimated total cost, $3,000,000. C. L. Rossiter, Pres.

BUFFALO, N. Y.—The Buffalo & Depew Ry. Co. expects to begin the construction soon of seven miles of double-track electric railway between Buffalo and Depew. Wm. B. Cutter, Pres.; Geo. A. Ricker, Ch. Engr., 714 Ellicott Square.

CLYDE, N. Y.—It is reported that the Osborn Engineering Co., Cleveland, O., will begin surveys next week for a proposed electric railway from Clyde to Resort and Bonnicastle, on Lake Ontario, for L. L. Moses and Edward Moyer, Syracuse, N. Y.

FAR ROCKAWAY (L. I.), N. Y.—The Long Island R. R. Co. has begun the construction of a single-track trolley line to connect Far Rockaway and Rockaway Beach, to run parallel to its steam road and on the same right of way.

CHESTER, PA.—The Midland St. Ry. Co. was incorporated March 24, with $100,000 capital stock, to build four miles of electric railway in Delaware county. Jas. D. Lalor, Pres.; J. W. Jackson, Sidney M. Burk, all of Philadelphia, are incorporators.

LANSDOWNE, PA.—Plans are being prepared and bids for construction will soon be asked, according to reports, for the Arcadia Park Ry. in this borough. Henry W. Benner, Pres.

WILMINGTON, DEL.—The new Wilmington & Chester Electric Ry., between the cities named, was formally opened on March 20. C. M. Clark, Pres., Wilmington.

NORFOLK, VA.—Official reports state that Sanford & Brooks, Baltimore, Md., have been awarded the contract for constructing eight miles of electric line, including power house, approaches and a pier at Sewell's Point for the Norfolk & Atlantic Terminal Co.

RICHMOND, VA.—Reports state that J. C. Short, New York, and others, have secured a franchise from the supervisors of Chesterfield county for an electric line between this city and Petersburg, 22 miles. Work must be completed within one year.

AKRON, O.—The Akron Traction & Electric Ry. was incorporated, March 21, with $100,000 capital stock, to build from Akron to Blue Pond. Aaron Wagoner and F. A. Sieberling are incorporators.

HAGERSTOWN, IND.—It is reported that the council has granted an exclusive franchise to Kepler & Kenney to operate an electric line within the city limits; also to furnish electric light and power. It is proposed to construct an electric line from Cambridge City to Economy, via this place.

GRAND RAPIDS, MICH.—Thos. F. Carroll, Pres., Grand Rapids, informs us that preliminary plans are being completed for the proposed Grand Rapids, Grand Haven & Muskegon Ry. from Grand Rapids to Muskegon, 39 miles. The bonds have not been offered to capitalists as yet. Contracts will be let as soon as project is financiered. David A. Crow, Vice-Pres.

CHICAGO, ILL.—It is announced that the Chicago City Ry. Co. has decided to substitute electric for horse power on its line on 63d St., between Ashland and Kedzie Aves.; estimated cost, $80,000. C. J. Reilly, Engr.

COLLINSVILLE, ILL.—The Collinsville, Caseyville & East St. Louis Electric Ry. Co., with principal office at East St. Louis, Ill., was incorporated March 23 with $20,000 capital stock, to build from Collinsville to East St. Louis. William Burroughs, Collinsville; W. H. Hueckel, Caseyville, and D. M. Browning, East St. Louis, are incorporators.

WAUPACA, WIS.—Official reports state that bids will probably be awarded about May 1 for constructing five miles of electric line between this city and the Wisconsin Veterans' Home, for the Waupaca Electric Light & Ry. Co. Grading is about completed. Irving P. Lord, Pres.; J. Nanson, Supt.

ST. PAUL, MINN.—E. A. Young, Theodore Borup, C. W. Bunn and others are interested in a project to build an electric line from St. Paul to White Bear Lake, and have asked the county commissioners for a franchise.

STILLWATER, MINN.—Thomas Lowry, Minneapolis, and C. G. Goodrich were granted a 25-year franchise, March 21, to build a street railway in this city.

KANSAS CITY, MO.—W. O. Hands, Kansas City, informs us that bids have been received and that contracts will be let about April 10 for the track and overhead construction on the East Side Electric Ry., to be ten miles in length when completed. But three miles will be built at first, and then the extension will be begun at once. The company will be in the market in about 15 days for double truck cars and two 175-K-W. direct-current generators. J. J. Heim, Pres., care of Ferd. Heim Brewing Co.——Reports state that the Electrical Installation Co., Chicago, has the contract for the overhead work, and the Falk Mfg. Co., Milwaukee, Wis., for the track work, on the old Northeast Electric Ry., which is being reconstructed for the Metropolitan St. Ry. Co.; cost, $250,000.

FRESNO, CAL.—S. N. Griffith, Alexander Gordon and others have incorporated the Fresno R. R. Co. with $500,000 capital stock to build from Fresno to Clovis, with branches, 20 miles. It is proposed to build outside of the city only.

SAN JOSE, COSTA RICA.—Press reports state that the first electric railway in Costa Rica is about to be built in the city of San Jose by the Costa Rica Electric Light & Transportation Co. of San Jose. H.T. Purdy, Ch. Engr., is in charge of the work, and D. M. Anderson, Washington, D. C., is first assistant. The bulk of the material used by the company will be of American make.

ELECTRIC LIGHT AND POWER.

AUGUSTA, ME.—The Kennebec Light & Heat Co. will soon begin the construction of its new power station. Local papers state that most of the machinery will be bought in Augusta. Estimated cost, $20,000.

LACONIA, N. H.—The council has awarded a contract for lighting the city for five years at $67.50 per arc light a year to the Laconia Electric Lighting Co. The company, it is stated, will put in enclosed arc lights.

BROCKTON, MASS.—Bids are asked by the city clerk until April 8 for lighting the streets and public property with electricity and gas for a term of years. The city at present pays $28,000 a year for lighting purposes.

MERRIMAC, MASS.—Geo. C. Larkin, Chn. Com., writes us that the town has accepted the report of the committee and has voted to bring the matter of municipal electric lighting before the town at a special meeting to be called soon. A two-thirds vote of the people present is required at two town meetings not less than two months apart. The plant will have a capacity for 41 1,200-c. p. arc lights and will cost about $12,000.

SHARON, MASS.—Bids were asked until March 27 for lighting the streets for one year from April 1. Silas A. Stone, First Selectman.

NEW HAVEN, CONN.—Bids are asked until 8 p. m., March 31, for 450 1,200-c. p. arc lights. F. P. Ryan, Chn.

CHARLOTTE HARBOR, N. Y.—F. A. McNeely, Secy. to Adjutant-General, Albany, informs us that the following was the only bid received March 24 for an electric plant for the state naval reserve building: The F. P. Little Electrical Construction & Supply Co., 135 Seneca St., Buffalo, N. Y., electric lighting apparatus, wiring and fixtures complete, $3,375; also two 500-c. p. arc lamps complete, $6,500; also one 18-in. projector, $610; also one 12-in. projector, $360; one Boughton Signal system, $740.

HERKIMER, N. Y.—The following submitted bids March 22 for constructing an incandescent light plant: The Stanley Electrical Mfg. Co., Pittsfield, Mass.; Utica Electrical Mfg. & Supply Co.; G. W. Stone, Utica, N. Y.; Knowlton & Kelley, Troy, N. Y. H. H. Longstaff, Clk.

NIAGARA FALLS, N. Y.—The Niagara Falls Power Co., it is stated, proposes to build a new wheelpit and add about 100,000 HP. to its plant. Orders for seven 2,500 HP. transformers have been placed with the Westinghouse Electric & Mfg. Co. by the Niagara Falls Power Co.

WAPPINGERS FALLS, N. Y.—This place voted down on March 21 the proposition to issue $15,000 in bonds for a plant.

ATLANTIC CITY, N. J.—H. F. Adams is reported as preparing plans for a 50-ft. addition to the plant of the Atlantic City Electric Light & Power Co.

WOODSTOWN, N. J.—This place has voted not to build a municipal plant. It is stated that a company is about to be formed to build the plant.

ERIE, PA.—The council has appropriated $5,000 for extending the electric conduit.

JOHNSTOWN, PA.—The Pittsburg, Johnstown, Ebensburg & Eastern R. R. Co. proposes to spend $8,000 on improving Wopsononock, to include an electric plant, etc.

PITCAIRN, PA.—The council has granted the North Versailles Electric Light Co. and the Turtle Creek Valley Electric Light Co. rights of way in the town. If either of the companies fails to commence work on the construction of its pole lines within six months the franchise will be forfeited.

UNIONTOWN, PA.—Theo. W. Bulger, Secy., writes us that nothing has been done in regard to building a plant, except to secure estimates, etc.

HANCOCK, MD.—It is proposed to put in a plant, water-works, etc. H. L. Henderson may be addressed.

ST. MICHAELS, MD.—The council, it is stated, is again considering the question of building a plant.

PETERSBURG, VA.—John L. Williams & Sons, Richmond, write us that Jas. F. Heywood, Contracting Engr., Baltimore, Md., will receive bids for constructing the water power plant for the Virginia Traction Co.

LOCKVILLE, N. C.—Press reports state that B. N. Duke and Julian S. Carr, Durham, N. C., and S. T. Morgan, Richmond, Va., are interested in a proposed water power plant at Lockville Falls, where it is proposed to develop about 6,500 HP.

SPARTANBURG, S. C.—J. M. Elford, Cy. Treas., writes us that no bids were opened Feb. 3 for furnishing arc lights, etc., as franchises, etc., were so difficult and not specific that all bids were declined. A new advertisement will be prepared.

FORSYTH, GA.—Bids are asked until April 3 for furnishing the materials and for erecting a plant. Moore & McCrary, Engrs., English-American Bldg., Atlanta, Ga.; T. J. Hardin, Mayor.

SANDERSVILLE, GA.—Plans for a plant are being prepared by Moore & McCrary, Atlanta.

TENNILLE, GA.—Moore & McCrary, 407 English-American Bldg., Atlanta, are reported as preparing plans for a plant.

CULLMAN, ALA.—Bids are asked until May 1 for constructing a plant and water-works to cost about $35,000. R. M. Newbold & Co., Engrs., 418 Chalifoux Bldg., Birmingham, Ala.; J. F. Beyer, Mayor.

HUNTSVILLE, ALA.—It is stated that T. W. Pratt is in the market for a plant and an electric railway.

MONROE, LA.—Bids are asked until April 17 for the purchase of $155,000 of bonds for use in building the proposed plant, water-works, sewerage system, etc. A. A. Forsythe, Mayor.

SCRANTON, MISS.—C. I. Friar, Supt., it is stated, wants to secure prices for additional electrical machinery for the city plant.

JONESBORO, TENN.—This place has asked for authority to issue $10,000 in bonds for a plant.

TULLAHOMA, TENN.—The legislature has been asked to grant this place permission to issue bonds for a plant, water-works, etc.

JEFFERSONVILLE, IND.—The committee has prepared specifications and will advertise for bids for furnishing an electric light service to the city for 10 years. The lights are to be of 2,000 c. p. and to burn all night. Bids will also be received for an incandescent service for private consumers.

RUSSELLVILLE, KY.—The question of a municipal plant is being considered. The contract for lighting the city held by the Russellville Electric Light Co. will expire soon.

BUTLER, O.—Oscar Wise writes us that the proposed water power plant will have a capacity for 20 1,600-c. p. arc and 500 16-c. p. incandescent lights; cost, $4,000.

FOSTORIA, O.—The contract for the erection of the new plant of the City Heat & Light Co. has been let to F. P. Lindsey, who has already completed a portion of the stack.

PLEASANT HILL, O.—The council has engaged the Hays Construction Co., Troy, O., to prepare plans, etc., for a plant.

ST. PARIS, O.—The Hays Construction Co., Troy, O., has been engaged to prepare plans and specifications for a plant.

WARREN, O.—The Warren Electric Light & Power Co. proposes to begin construction May 1 of a new plant to cost about $30,000. The company has asked for a 5-year extension to its franchise.

BROWNSTOWN, IND.—The Phoenix Construction Co., Chicago, Ill., has been awarded the contract for building the plant and water-works at $26,267.

GAS CITY, IND.—It is stated that the city will make improvements to its plant. J. M. Bravo, Cy. Engr.

INDIANAPOLIS, IND.—Bids are asked until April 5 for two 25-K-W. dynamos, switchboards, two 30-HP. gas engines, etc., for the soldiers' and sailors' monument. E. P. Thompson, Secy.

CASEVILLE, MICH.—The council is reported to be in favor of electric lights.

MONROE, MICH.—At the spring election this place will vote on the question of issuing $20,000 in bonds for a plant.

GALESBURG, ILL.—The Galesburg Electric Illuminating & Power Co. has sold its light and gas plant to a Portland, Me., syndicate.

MILWAUKEE, WIS.—R. Martin Patitz, Milwaukee, is preparing plans for a plant for the county court house.

MANKATO, MINN.—A company is being organized to build a plant and a street railway.

MINNEAPOLIS, MINN.—The aldermen are considering an ordinance introduced by Alderman Chatfield directing the construction of underground conduits for the electric wires, etc.

BURLINGTON, IA.—Geo. O. Ray, Trustee, has submitted a proposition to the council to put in a plant and light the city, and which, after a term of 10 years, is to become the property of the city.

GENOA, NEB.—Bids are asked until April 20 for the materials and for constructing a plant at the Indian School. Plans, specifications, etc., may be examined at the Indian office, Washington, D. C.; the offices of the Builders' & Traders' Exchange, Omaha, Neb.; the Northwestern Manufacturers' Association, St. Paul, Minn.; the U. S. Indian Warehouse, 1602 State St., Chicago, Ill. J. H. Ross, Supt. Indian School, Genoa.

MAYSVILLE, MO.—It is stated that this place proposes to build a plant.

HILLSBORO, TEX.—O. D. Brooks, Cy. Secy., writes us that franchises for plants have been granted to the Hillsboro Investment & Electric Co., to Geo. B. Peyton and to Crumley & Morris. The plant of the first is in operation and those of the last two are under construction.

SAN ANTONIO, TEX.—The council has extended the franchises of the Mutual Electric Light Co. and the San Antonio Gas Co. It is stated that the companies will spend about $60,000 this year in improving the plants.

STILLWATER, OKLA.—Abercrombie & Miller write us that the matter of granting a franchise for a plant to them has been delayed by adverse action of the council.

SEATTLE, WASH.—The Snoqualmie Falls Power Co. has asked for permission to construct subways for its wires down town. Wm. T. Baker, Pres.

SAN FRANCISCO, CAL.—Jas. D. Phelan, Mayor, writes us that the report of the consulting engineer, A. M. Hunt, 331 Pine St., San Francisco, on a municipal plant, is now in the hands of the supervisors. The plant will have a capacity for 1,500 2,000-c. p. arc and 5,000 16-c. p. incandescent lights, and will be operated by steam; estimated cost, $459,000.

HAVANA, CUBA.—Press reports state that J. P. Hall, 143 Liberty St., New York, has been awarded the contract at $285,000 for lighting the public buildings with electricity. The contract calls for a plant equipped with two direct-connected alternators, having a capacity of 450-K-W. each, to be driven by two Corliss engines, each having a capacity of 650 HP. Steam will be furnished these engines from three 500-HP. boilers. The building will be of brick. The material and workmen, under the contract, must all be taken from the United States.——Hugh J. Rilley, 31 Broadway, New York, has the contract for erecting electric, water and ice plants at Guanesos, 50 miles from Havana, at about $250,000, according to reports.

UITENHAGE, CAPE COLONY, SOUTH AFRICA.—It is stated that the council has voted to put in a plant.

NEW COMPANIES.—Ottawa Ry., Light & Power Co., Ottawa, Ill.; $150,000; F. S. Donnell, Louis W. Hess.

High Falls Electric Co., Malone, N. Y.; $20,000; Joseph F. Wright and Frederick O. Kilburn, Malone; J. Henry Abbott, Morton P. Abbott, Gouverneur, N. Y.

Maritime Improvement Co., Newark, N. J.; $3,000,000; to construct canals, wharves, electric light and gas plants, and to put up telegraph and telephone lines; C. H. Cramp, Philadelphia; Gustave Lindenthal, New York; C. G. Hill.

American Heating & Lighting Co., Portland, Me.; $500,000; Willis Mitchell, Malden, Mass.; Chas. E. Pinkham, Boston; Frank M. Davis, Cambridge, Mass.

El Dorado Power Co., San Francisco, Cal.; $150,000; W. A. Bell, T. Clark, C. O. Richards, G. Lambert.

Marshfield Power & Light Co., Marshfield, Vt.; $5,000; to build a plant at Molly's Falls.

Lake View Domestic Water Co., Pasadena, Cal.; $35,000; to supply water for the town and tract of Lake View, develop and pump water, etc., and to establish and operate electric light and power plants, etc.; Geo. H. Coffin, Edmund Stearns, Willis J. Shields, H. L. Wood.

People's Gas & Electric Co., Peoria, Ill.; $500,000; O. J. Bailey, Philo B. Miles, Sumner R. Clark.

Pittsfield Electric Light & Power Co., Pittsfield, Me.; $50,000, with $100 paid in; Pres., Arthur B. Lake, Old Town, Me.; Treas., Frank L. Smith, Pittsfield, Me.

Chandler Cotton Oil Co., Chandler, Okla.; to sell the products of cotton and other seeds and carry on the business of electric lighting and power; P. H. Hoffman, Chandler; W. Burgess, Corsicana, Tex.; J. J. Culbertson.

Ouray Electric Power & Light Co., Ouray, Colo.; $200,000; Charles H. Nix, Frank Sparks, John Doss.

BRIDGES

BOSTON, MASS.—The Pittsburg Bridge Co., Pittsburg, Pa., submitted the lowest bid March 27, at $10,949, for a retractile draw for the Malden bridge over the Mystic River. Wm. Jackson, Cy. Engr.——The King Bridge Co., Cleveland, O., has submitted the lowest bid, at $13,050, for furnishing the material and constructing the steel superstructure of the Charlesgate West bridge. B. W. Wells, Supt. Sts.

FITCHBURG, MASS.—F. W. Bateman, of Parker & Bateman, Engrs., Clinton, Mass., informs us that there is to be a temporary frame and pile trestle constructed over the Fitchburg R. R. and Nashua River, to be used by the Fitchburg & Suburban St. Ry. until the permanent abolition of grade crossings now in contemplation shall be completed. The structure will be about 437 ft. in length; spans 15 to 22 ft., mostly 22 ft.

PROVIDENCE, R. I.—Bids are asked until April 13 for furnishing the material and for constructing a steel highway bridge over the Moshassuck River, as stated in our advertising columns. Robt. E. Smith, Comr. Pub. Wks.

HARTFORD, CONN.—The bridge commissioners have decided to ask bids for a stone bridge of nine spans, 40 ft. each, and for a steel bridge of eight spans, 40 ft. each; width, 66 ft. Edwin M. Graves, Engr.

BAINBRIDGE, N. Y.—A town meeting will be held April 4 to vote on the question of appropriating $15,000 to construct an iron bridge over the Susquehanna River.

BUFFALO, N. Y.—The grade crossing commission received the lowest bids March 21 for the viaduct at Elk St. and Abbott Road, as follows: Substructure, Edward W. Mitchell, $115,422; bids for substructure rejected; superstructure, Elmira Bridge Co., Elmira, N. Y., plan No. 1, with guarantee, $194,434; without guarantee, $192,964; plan No. 2, with guarantee, $193,128; without guarantee, $191,668.

GAINESVILLE, N. Y.—Bids are asked until April 15 for the steel superstructure and masonry abutments of a highway bridge near Hardy's Station, according to reports. W. E. Hoyt, Ch. Engr., B., R. & P. Ry., Rochester.

MOUNT VERNON, N. Y.—The board of aldermen decided March 21 to widen the Third St. bridge over the Hutchinson River between Mount Vernon and Pelham.

NEW YORK, N. Y.—It is reported that a new bridge will be constructed this year by the N. Y. C. & H. R. R. R. Co. over Spuyten Duyvil Creek, to consist of three riveted latticed trusses, 106 ft. 3 ins. long each, with a draw span of 286 ft., to cost about $200,000. A contract for the substructure has been awarded to the Degnon-McLean Construction Co., 1 Broadway.

TROY, N. Y.—The senate passed a bill March 21 authorizing the Albany Ry. Co. to construct a bridge over the Hudson River between Troy and Watervliet.

HOBOKEN, N. J.—A bill was passed by the legislature March 22 for the proposed viaduct to connect Hoboken with Jersey City Heights.

SOMERVILLE, N. J.—Bids are asked by the board of freeholders until April 4 for a low truss single-span iron or steel bridge in Montgomery township, according to reports.

BRADDOCK, PA.—The North Braddock borough council has accepted new plans submitted by the Monongahela Traction Co. for a steel trestle 200 ft. long over 6th St. hollow.

BRADFORD, PA.—P. B. Winfree, Cy. Engr., writes us that bids will be asked later for a steel Pratt truss bridge of one span 108 ft., width 24 ft., with two 8-ft. walks; estimated cost, $3,800; substructure, $1,200.

GEORGETOWN, D. C.—Bids are asked until April 27 for reconstructing pier No. 4 of the aqueduct bridge across the Potomac River, as stated in our advertising columns. Lieut.-Col. Chas. J. Allen, U. S. Engr., 601 18th St., N.W.

CHATTANOOGA, TENN.—The county steel bridge over Chickamauga Creek at Lightfoot's mill has been carried away by high water; also the trestle at Salt Creek has been washed away. W. L. Dodd, County Engr.

NASHVILLE, TENN.—Bids are asked until April 10 for the purchase of $100,000 of 4% bridge approach bonds, according to reports. J. F. Byrne, Cy. Recdr.

BATAVIA, O.—Bids are asked by the county commissioners until April 12 for a steel bridge of one span, 115 × 16 ft., over Big Indian Creek. J. W. Davis, Audr.

CLEVELAND, O.—It is proposed to construct a bridge at the entrance of the lower boulevard to Gordon Park this spring. President McBride of the park board may be addressed.

DEFIANCE, O.—R. A. Houghton, Div. Road Master, Wabash R. R., Defiance, informs us that two highway bridges with iron posts and beams, one 26 ft. wide, will be constructed by the company's men.

TIFFIN, O.—Reports state that the Baltimore & Ohio R. R. Co. has decided to construct a new bridge over the Sandusky River near the present structure.

WAVERLY, O.—H. W. Overman, Cy. Engr., writes us that the proposed extension of Lock and Second Sts., which will be voted upon at the April election, will require two bridges over the canal.

CHICAGO, ILL.—Bids are asked by the board of sanitary trustees, 1110 Security Bldg., until May 10, for furnishing the material and for constructing the sub and superstructure of a four-track swing bridge having a span of 334 ft. 6 ins., as described in our advertising columns. J. F. Haas, Clk.

CRESCENT CITY, ILL.—Bids are asked until April 10 for taking down and replacing the four metal tubes under the south end of the Fidler bridge over the Vermilion River. Ira O. Baker, Engr., Champaign; E. H. Skeels, Chn. Com.; B. J. Gibson, Clk. of Iroquois township.

DES MOINES, IA.—A. K. Campbell informs us that two bridges will be constructed over the Des Moines River. Contracts have not been let. Address E. E. Campbell.

IOWA CITY, IA.—Bids are asked by the county auditor until April 7 for iron bridges of 100 ft. and less, according to reports.

ST. PAUL, MINN.—Bids are asked until April 3 for the purchase of $18,000 of 3½% bridge bonds, according to reports. W. R. Johnson, County Audr.

EAU CLAIRE, WIS.—Bids are asked until April 1 for a stone abutment of the Barstow St. bridge, according to reports. T. P. Cochrane, Cy. Clk.

MITCHELL, S. DAK.—Bids are asked until April 3 for a steel bridge over James River, according to reports. H. B. Anderson, County Audr.

VIRGINIA CITY, MONT.—The county commissioners have awarded a contract to J. M. Luke, Des Moines, Ia., at $4,900, for a steel bridge of three spans 95 ft. each and 14-ft. roadway.

ROSSVILLE, KAN.—C. E. Fritz informs us that it is proposed to construct an iron rail structure 200 ft. long of four spans, 16 ft. wide, on tubular piers; estimated cost, $12,000. Address B. T. Pankey, Rossville.

NEW WHATCOM, WASH.—Bids are asked until April 5 for a combination highway bridge, 120-ft. span, on pile piers, near Vanzandt. Alex. Van Wyck, Clk. County Comrs.

NOVELTY, WASH.—The county commissioners, Seattle, have resolved to construct a steel bridge of about 225-ft. span over the Snoqualmie River.

SPOKANE, WASH.—A contract has been awarded to the San Francisco Bridge Co., at $3,750, for replacing the wooden structure of the North Washington St. bridge.

APTOS, CAL.—Bids are asked until April 3 for plans and specifications for a bridge over Valencia Creek. H. H. Miller, Clk. Bd. of Supervisors, Santa Cruz.

OAKLAND, CAL.—Bids are asked until April 10 for a trestle bridge over Arroyo Macho Creek. Frank C. Jordan, Clk. Bd. of Supervisors.

CHATHAM, ONT.—Bids are asked until April 8 for two masonry abutments of a bridge over the Thames River. J. C. Fleming, County Clk.

BUILDINGS

NASHUA, N. H.—Plans are asked until April 19 for a new court house for Hillsboro county. Address J. F. Clough, County Comr., Manchester, N. H.

BOSTON, MASS.—Plans have been prepared, according to reports, for an 8-story stone and iron store and office building to be erected at 185 Summer St. for Atherton T. Brown; estimated cost, $70,000. J. H. Besarick, Arch., 33 Bedford St.; Woodbury & Leighton, Builders, 166 Devonshire St.——Plans have been filed for a permit to erect an 11-story steel, brick and stone building for the Lewis F. Perry & Whitney Co. at Province St. Cabot, Everett & Mead, Archs., 62 Devonshire St.

BOSTON, MASS.—The following bids were received by the navy department, Washington, D. C., March 25, for constructing a new room and making extensive alterations in building No. 12 in the Boston Navy Yard: (a) for the main machine shop portion of the building, (b) for what is known as a crystal palace: L. K. Marston, Boston, (a) $25,933; (b) $55,036. W. A. & H. A. Root, Boston, one bid, $82,253. Connors Bros., Boston, (a) $32,123; (b) $57,381. William H. Keyes, Boston (a) $23,560; (b) $55,856; F. G. Coburn & Co., Boston, (a) $21,221; (b) $51,750. Woodbury & Leighton, Boston, (a) $22,500; (b) $54,500. Norcross Bros., Boston, (a) $20,548; (a) $53,504.

GLOUCESTER, MASS.—The committee on public property has asked the council for an appropriation of $30,000 with which to erect a new brick school building on Maplewood Ave.

WATERBURY, CONN.—Bids are asked by the Center school district until April 5 for mason work, plumbing, heating, etc., for an addition to the East Main St. school building. Aug. I. Goodrich, Chn.

BROOKLYN, N. Y.—Bids are asked by the board of education, at 585 Broadway, New York, until April 10, for alterations in and erecting an addition to Public School No. 5, Borough of Brooklyn.

NEW YORK, N. Y.—Bids are asked by the supervising architect, Washington, D. C., until March 31, for ventilating apparatus for the basement and sub-basement of the U. S. Court House and Post Office building in this city.——Bids are asked by the board of education, at 585 Broadway, until April 6, for erecting a new school building on 65th and 66th Sts., between the Boulevard and Amsterdam Ave., to be known as Public School 181.——Bids have been asked, according to reports, for erecting a 3-story brick club house for the railroad branch of the Y. M. C. A. at West 72d St. C. L. W. Eidlitz, Arch., 1123 Broadway.——Plans are said to have been agreed upon for the remodeling of the waiting rooms at the Grand Central Station at 42d St., so as to make one large union station.——Plans have been filed by Wm. C. Oesting for five 5-story brick flat buildings at 3d Ave. and 171st St., to cost $97,000. H. T. Howell, Arch., 748 East 138th St.; by E. D. Howes, Jr., 303 West 120th St., for a 6-story brick flat building on 112th St., near 8th Ave., to cost $75,000. S. B. Ogden & Co., Archs., 954 Lexington Ave.;

by Arthur Gorsch, 1444 3d Ave., for three 5-story brick flat buildings on 124th St., near Amsterdam Ave., to cost $72,000. Frank Wolfgang, Arch., 190 Bowery; by Henry Corn, 170 5th Ave., for a 12-story brick store and loft building at 632 and 634 Broadway, to cost $375,000. Robert Maynicke, Arch., 725 Broadway; by Ida E. Moore, 225 West 111th St., for a 6-story brick bachelor apartment building on 111th St., near 7th Ave., to cost $100,000. C. A. Millner, Arch., 81 East 125th St.; H. M. Moore, Builder; by Margarette Strese, Vyse Ave. and Home St., for four 5-story brick flat buildings at 169th St. and Clinton Ave., to cost $85,000. W. C. Dickerson, Arch., 3d Ave. and 149th St.; by E. Wm. Wagner, Boulevard and West End Ave., for a 6-story brick store and loft building at 113 to 117 West 41st St., to cost $325,000. J. K. Thompson, Arch., 60 Broadway; by John McLaughlin, 346 East 81st St., for five 5-story brick flat buildings on 88th St., near Madison Ave., to cost $100,000. Charles Stegmayer, Arch., 306 East 82d St.; by Stein, Cohen & Roth, Owners and Archs., 41 Union Square, for a 9 and 11-story brick flat building at 70th St. and Central Park West, to cost $650,000; by Gerson Hyman, 227 East 10th St., for three 6-story brick flat buildings at 323 to 329 East 129th St., to cost $85,000. Schneider & Herter, Archs.; by Wm. C. Oesting, for five 5-story brick flat buildings on 3d Ave., near Wendover Ave., to cost $88,000. H. J. Howell, Arch. ——The following bids were received by the board of education for erecting an addition to Public School 46, 156th St. and St. Nicholas Ave.: Thos. Cockerill & Son, 550 West 41st St., $87,900; Murphy Bros., 407 East 101st St., $77,474; Bath & Wahlig, $89,947; Mapes-Reeve Construction Co., 150 Nassau St., $79,828; P. Gallagher, 150 5th Ave., $78,900; Mahoney Bros., 52 New Bowery, $85,875; Harry McNally, 287 4th Ave., $77,000; A. Nugent & Son, 41 Columbia St., $78,550.

PLATTSBURG, N. Y.—Bids are asked until April 2 for constructing a new school building at Broad and Cemetery Sts. Address E. C. Baker.

WHITE PLAINS, N. Y.—Westchester county supervisors have referred the plans and specifications which have been received for an addition to the court house to next year's board.

IRVINGTON, N. J.—Bids will soon be asked, according to reports, for a new school building in ward No. 1. William Moll, Arch.

JERSEY CITY, N. J.—Bids are asked by the trustees of the Free Public Library, until April 3, for erecting a free public library building on Jersey Ave., Montgomery and Mercer Sts. L. J. Gordon, Pres.

NEWARK, N. J.—Reports state that the Prudential Life Insurance Co. will erect a new building opposite to the present structure at Broad and Bank Sts., to cost about $1,500,000. John F. Dryden, Pres.——Improvements are to be made to the Homes Bldg., 120 and 122 Market St., to cost about $15,000. Hurd & Sutton, Archs.

HARRISBURG, PA.—Bids are asked until April 15 for erecting a number of buildings for the State Lunatic Hospital. H. L. Orth, Pres.

NORTH BRADDOCK, PA.—Bids are asked until April 17 for erecting a municipal building for this borough. J. M. Reese, Clk.; F. C. Sauer, Arch., Hamilton Bldg., Pittsburg, Pa.

PHILADELPHIA, PA.—Plans are being prepared, according to reports, for a new 18-story office building on Broad St., near Chestnut St., for J. Wallace Hallowell. Seeler & Roberts, Archs.——Plans have been filed by Roydhouse, Arey & Co. for a new 3-story stable building to be built at 12th St. and Glenwood Ave., for the National Biscuit Co.; estimated cost, $36,000. Hales & Billinger, 102 South 12th St.——The managers of the Masonic Home, Broad and Ontario Sts., will soon erect a new 2-story infirmary building, 45 × 21 ft., of fireproof construction.

ANNAPOLIS, MD.—A site is now being sought for the proposed $100,000 public building to be erected here.

BALTIMORE, MD.—It is announced that Sperry, Jones & Co. will erect a large office building on the site of the National Mechanics' Bank Bldg., at Calvert and Fayette Sts. J. E. Sperry, Arch., 601 Herald Bldg.

CHARLOTTESVILLE, VA.—Plans have been selected for a new 3-story dormitory building, 45 × 200 ft., for the University of Virginia; estimated cost, $20,000. Paul Z. Pelz, Arch., Washington, D. C.

NEWPORT NEWS, VA.—R. W. Withers, Newport News, is reported to contemplate the erection of a new brick and stone theatre building at Washington Ave. and 33d St., to cost about $60,000. M. J. Dimock, Arch.

ATHENS, W. VA.—Bids are asked until April 13 for erecting a low-pressure steam heating plant at the girls' dormitory of the State Normal School. R. S. Carr, Secy., Charleston, W. Va.

FAIRMOUNT, W. VA.—Bids are asked until April 13 for a low-pressure gravity return steam heating plant for the State Normal School building in this city. Harrison Albright, Arch.; R. S. Carr, Secy. Bd. of Regents, both of Charleston, W. Va.

KANAWHA CITY, W. VA.—Bids are asked until April 12 for building lock house at lock No. 11, Great Kanawha River. Maj. W. H. Bixby, U. S. Engrs., Charleston, W.Va.

CINCINNATI, O.—It is reported that B. H. Kroger will erect a new 6-story brick and iron building on Hunt St., near Broadway, to be used as a wholesale grocery store; estimated cost, about $60,000.

CLEVELAND, O.—M. J. O'Donnel, Braddock, Pa., is reported to contemplate erecting a 4-story apartment building on Handy St., near Euclid St., to cost $40,000. Fugman & Uhlrich, Archs..

COLUMBUS, O.—Reports state that E. T. Mithoff will soon erect a 4-story fireproof business building on North High St., near Spring St.

KALAMAZOO, MICH.—Plans are being prepared for a new 5-story hotel building, 77 × 180 ft., according to reports, for the Kalamazoo Hotel Co. E. O. Fallis & Co., Archs., Chamber of Commerce Bldg., Toledo, O.

LIMA, O.—A. J. Morris, Clk., informs us that the contract for heating and ventilating the new 16-room school building in this city was awarded, March 20, to the Peck-Williams Heating & Ventilating Co., Cincinnati, O., using the double fan system, at $4,594. Other bidders were: B. F. Sturtevant Co., Chicago, using steam, $5,800; American F. & F. Co., Toledo, O., $5,300; Vogelgesang Furnace Co., Columbus, O., $3,900; Kruse & Derventer, Indianapolis, Ind., $3,700.

CHICAGO, ILL.—Reports state that plans are being prepared for a 6-story business building to be erected for Henry Horner & Co. at Randolph and Jefferson Sts., to cost about $70,000. S. A. Treat, Arch.——H. G. Wright, Reaper Block, is said to be preparing plans for a 4-story apartment house to be erected on Greenwood Ave., between 54th and 55th Sts., to cost $45,000.——Plans are being prepared by Jarvis Hunt, 1407 Monadnock Bldg., for a 12-story building at West Water and West Randolph Sts., to replace the Manufacturers' and Merchants' Bldg., recently burned; estimated cost, $250,000.

MATTOON, ILL.—Charles Hanker, Toledo, O., has been awarded the contract for erecting two new school buildings for this city, at $54,611; work to begin in July.

SPRINGFIELD, ILL.—The county board of supervisors is considering the advisability of adding $20,000 to the appropriation for remodeling the court house, in order to raise the building, thus placing all three floors above the street level.

MILWAUKEE, WIS.—The Boston Ground Rent Co. has had plans prepared for a 6-story brick building to be erected on Milwaukee St., to cost $65,000. Ferry & Clas, Archs., 419 Broadway.

SPRING GROVE, MINN.—Bids are asked until April 2 for erecting an 8-room school building. L. T. Johnson, Secy. Bd. of Education; Stoltze & Schick, Archs., La Crosse, Wis.

MANKATO, MINN.—The following bids are reported to have been received by J. B. Meagher, March 17, for erecting the superstructure of the St. Joseph's Hospital building; (a) copper cornice, slate roof; (b) galvanized iron cornice, slate roof; (c) wood cornice, shingles: J. B. Nelson & Co., Mankato, (a) $20,564, (b) $19,419, (c) $18,714; Kleinschmidt Bros., Mankato, (a) $20,295, (b) $19,130, (c) $18,185; Frank Wittmers, Mankato, (a) $19,952, (b) $18,832, (c) $18,250; J. J. Walrof, Mankato, (a) $18,687, (b) $17,487, (c) $17,087; Joseph F. Schingle, Mankato, (a) $18,337, (b) $17,146 (accepted), (c) $16,640.

DES MOINES, IA.—Plans are being prepared, according to reports, for a new auditorium with a seating capacity of 3,500; estimated cost, $35,000. Hallett & Rawson, Archs.

OSAGE, IA.—Bids are asked until April 15 for erecting a store and apartment building at Osage for B. M. and Sara E. Cleveland. Netcott & Donnan, Archs., Independence, Ia.

POPLAR, MONT.—Bids are asked by the office of indian affairs, Washington, D. C., until April 26, for constructing two brick dormitory buildings and water and sewer systems at the Fort Peck Agency. C. R. A. Scobey, U. S. Indian Agent, Poplar.

FULTON, MO.—G. T. Gancy, Cy. Clk., informs us that this city has voted to issue $10,000 in bonds, $6,000 to be used for the city hall and $4,000 to be used in buying a new engine and in making other repairs to the electric light plant. Bids will be received for purchase of bonds, but no date fixed.

SAN CARLOS, ARIZ.—Bids are asked by the office of indian affairs, Washington, D. C., until April 18, for constructing two adobe dormitories, dining hall, school buildings, water and sewer systems, gasoline gas plant, etc., at the San Carlos Agency. Capt. H. F. Ritzius, U. S. Indian Agent, San Carlos.

HAMILTON, ONT.—Bids will soon be asked, according to reports, for erecting a 30-room hotel building in this city. Stewart & Son, Archs., Provident Loan Bldg.

OTTAWA, ONT.—L. J. Fauteux has been awarded the contract for erecting the new museum and science building, at $38,000. Other bidders were: Paquette & Godbout, St. Hyacinthe, Que.; Alexander Garvock, Ottawa; Viau & Lachance, Hull, Que.; J. J. Lyons, Ottawa; Martineau & Prenoveau, Montreal; Jos. Bourque Hull.

WATER-WORKS.

BOSTON, MASS.—Bids are asked until noon March 31 for furnishing during the year about 12,000 lbs. of No. 1, about 30,000 lbs. of No. 2, and about 5,000 lbs. of No. 3 composition castings. J. R. Murphy, Water Comr.

SALEM, MASS.—The Warren Foundry & Machine Co., 160 Broadway, New York, has been awarded the contract for about 350 tons of cast-iron water pipe in lengths as follows: 30 lengths of 4-inch pipe; 600 of 6-in.; 600 of 8-in., and 180 lengths of 12 in.

SPRINGFIELD, MASS.—The commissioners are reported to have abandoned the plan of securing a new supply from Blandford and Otis Ponds, and are now considering plans for a filter plant.

STOUGHTON, MASS.—The supreme court has decided that the town must hold to the agreement and contract made by the commissioners in buying A. E. Lincoln's farm for $14,000 in 1897 and constructing the works.

WEST SPRINGFIELD, MASS.—Snow & Barbour, Boston, have submitted a report on the proposed water supply for this place to be furnished by Holyoke. About 575,000 gallons a day will be required. It is recommended that a 2,500,000-gallon reservoir be built.

ALBANY, N. Y.—Bids are asked until April 4 for laying water mains in certain streets. G. I. Bailey, Supt.

CANTON, N. Y.—Bids are asked until April 12 for digging trench and laying 2,288 ft. of water pipe, setting hydrants, etc. J. H. McIntosh, Supt.

RENSSELAER, N. Y.—The committee has submitted its report on the question of a new water supply. Mayor Lansing may be addressed.

WAPPINGERS FALLS, N. Y.—This place voted March 21 against issuing $50,000 in bonds for works.

YONKERS, N. Y.—Bids are asked until April 6 for furnishing 206 lengths of 8-in. pipe of 600 lbs. a length of 12 ft. and 208 lengths of 6-in. pipe of 400 lbs. a length. J. C. Shotts, Pres. Bd. Water Comrs.

ATLANTIC CITY, N. J.—Mayor Thompson has recommended the construction of a water main across the meadows, at a cost of about $110,000. E. D. Irelan, Cy. Clk.; Jno. Hackney, Cy. Surv.

DOVER, N. J.—H. F. Dunham, Engr., Dover Water Co., 2 Wall St., New York, is preparing plans for a new reservoir for an additional supply, according to reports.

NEWARK, N. J.—Press reports state that the street and water commissioners on March 28 decided to advertise for bids for an auxiliary water supply from driven wells at Belleville. The city now has a supply of 27,500,000 gallons daily, with about 3,000,000 gallons daily from driven wells when required. In September, 1900, when the city acquires control of the Pequannock plant, there will be 50,000,000 gallons daily supplied. It is necessary to procure an additional supply of pure water for emergencies. Recently Arthur Connelly, a contractor, offered to drive wells enough at Belleville to give a daily supply of about 10,000,000 gallons. He was told to make a written offer to the board, and this was presented at the meeting March 28. Philips & Worthington, contractors, asked for an opportunity to present a plan to the board. This offer obliged the board to open the matter to competition, and a motion was made that the engineer be instructed to advertise for bids. Commissioner Van Duyne objected, saying that he thought Engineer Jacobson had reported to the board that the driven-well plan of water supply was impracticable. He favored a contract with the East Jersey Water Co., and urged upon the board the importance of the meter system.

CANONSBURG, PA.—Councilmen Little and Norris have been appointed a committee to confer with Chandly Bros. & Co., Beaver Falls, Pa., with regard to putting in works or of granting to them a 20-year franchise. The question of municipal works, however, is now favorably considered.

MEADVILLE, PA.—Bids are asked until 8 p. m., March 30, for furnishing the following supplies for the works f. o. b. Meadville: About 19 tons (2,000 lbs.) of 6-in. standard water pipe, 34½ lbs. a ft.; 13 tons of 4-in. standard water pipe, 22 lbs. per ft.; 1½ tons of specials; 2 standard hydrants, 2 nozzles, 6-in. bottom con. 6-ft. grade to bottom pipe; 7 standard hydrants, 2 nozzles, 4-in. bottom con. 6-ft. grade to bottom pipe; all hydrants to have standard secondary gate valves and cast-iron extension boxes; 5 standard hub end 6-in. gate valves, C.-I. extension boxes; 14 standard hub end 4-in. gate valves, C.-I. extension boxes; 1,000 ft. of ½-in. standard galvanized-iron service pipe; 50 service boxes, for ½-in. stops, brass covers, No. 11; 100 ½-in. standard stopcocks, round way, for services. D. T. McKay, Jr., Cy. Clk.

MONESSEN, PA.—H. Dallas McCabe, Engr., writes us that bids will be opened about April 4 for furnishing the machinery, etc., and for constructing works for the Monessen Water Co. The water supply will be secured from the Monessen Steel Co.'s pumping station. There will be required four miles of 4 to 12-in. cast-iron pipe, 180,000-gallon tank, 34 Ludlow valves, 30 Ludlow hydrants, etc. A filter crib in the Monongahela River bed may be used. The works will cost $17,000.

PITTSBURG, PA.—E. M. Bigelow, Dir. Pub. Wks., has let the following contracts for furnishing supplies to the water department during the year: Gate valves, Michigan Brass & Iron Works; fire hydrants, Ludlow Valve Mfg. Co.; cast-iron water pipe and specials, National Foundry & Pipe Works; cast-iron gate boxes, Bingham & Taylor, New York; pig lead, Bailey-Farrell Co.

POTTSVILLE, PA.—Maj. Heber S. Thompson, of the county commissioners, writes us that nothing has yet been done towards erecting a reservoir at the almshouse.

BALTIMORE, MD.—Bids are asked until April 5 for hauling such valves, cast-iron water pipe and other iron castings as the water board shall require to have hauled during the balance of the year. The valves, pipe and pipe fittings will be of all sizes, from 1½ to 48 ins. in diameter, and the maximum weight of the other castings will not exceed four tons for any piece. W. L. Kenly, Ch. Engr.

HANCOCK, MD.—It is proposed to build works, an electric plant, etc. Address W. D. Myers and E. P. Cohill.

DANVILLE, VA.—The council has appropriated $2,200 for a main in Holbrook St.

ATLANTA, GA.—City Engineer Clayton is preparing estimates for repairing the water-works dike.

CULLMAN, ALA.—Bids are asked until May 1 for constructing works and an electric plant to cost about $35,000. R. M. Newbold & Co., Chalifoux Bldg., Birmingham, Ala.; W. H. Jones, Cy. Clk.

MONTGOMERY, ALA.—Bids are asked until April 20 for exchanging the present air cylinders upon the city's compressor for larger ones and for application of the air lift to three new artesian wells, as stated in our advertising columns. G. A. Ellis, Consult. Engr.; R. H. Somerville, Cy. Treas.

MONROE, LA.—Bids are asked until April 17 for the purchase of $177,000 of bonds for improving the works, constructing a light plant, sewerage system, etc. A. A. Forsythe, Mayor.

BROWNSVILLE, TENN.—Estimates for a new pump and new mains to cost about $50,000 are being secured. T. B. King may be addressed.

FAYETTEVILLE, TENN.—Guild & Co., Chattanooga, Tenn, are reported to have submitted the lowest bid, at $34,500, for furnishing the materials and for constructing the works. This bid is in excess of the bond issue of $30,000. It is stated that the bids will be rejected.

SHELBYVILLE, TENN.—R. J. Cunningham, Treas. National Water-Works & Construction Co., Hamilton Bldg., Pittsburg, Pa., writes us that the contract for the new standpipe has been let to a Chattanooga company.

TULLAHOMA, TENN.—This place has asked for authority to issue bonds for works, an electric plant and a sewerage system. W. H. McLemore, Cy. Clk.

ELIZABETHTOWN, KY.—Bids are asked until April 5 for furnishing and erecting a standpipe. R. L. Wintersmith, Mayor.

CINCINNATI, O.—Bids are asked until April 28 for constructing settling reservoirs and for laying pump mains from the Eastern Pumping Station, etc., as described in our advertising columns. Aug. Herrmann, Pres. Bd. Water-Works Trustees; C. G. Roth, Clk.——The circuit court, in an opinion preferred by Judge Swing, has affirmed the common pleas judgment holding that the Lane & Bodley contract for the erection of water-works engines is legal.

DOYLESTOWN, O.—This place will soon vote on the question of issuing $20,000 in bonds for works.

LONDON, O.—Press reports state that L. E. Miller has been appointed receiver of the London Water Co. by the United States court on the application of Henry E. Huntington, of California. The company, authorized by the city, issued $140,000 bonds in December, 1890, of which Huntington holds bonds on which it is alleged interest has been defaulted to the amount of $1,700.

MOUNT GILEAD, O.—This place, it is stated, will soon vote on the question of issuing $35,000 in bonds for works.

SCIO, O.—The Scio Water Supply Co. has been incorporated to build works; capital stock, $25,000. Incorporators: W. F. Stewart, Philadelphia, Pa.; A. C. Le Comte, Marietta, O.; C. W. Stewart, Stewart, O.; W. T. Hogue, Scio. The contracts for the construction have probably all been let.

BROWNSTOWN, IND.—The Phoenix Construction Co., Chicago, has been awarded the contract for constructing the works and electric plant, at $26,267. There will be a pumping and power station, 34 × 50 ft., and a wing, 14 × 30 ft., for the electric apparatus; a smokestack, of brick, 6½ ft. square at the base, with 17-in. walls to a distance of 18 ft., and a uniform slope to the top; a pumping engine, including a 100-HP. boiler, with a capacity of 750,000 gallons of water a day; a standpipe 16 ft. in diameter and 60 ft. high; 25 hydrants, etc.

GAS CITY, IND.—It is stated that the council wants bids on improving the works. J. M. Bravo, Cy. Engr.

GOSHEN, IND.—Bids are asked until April 17 for furnishing the materials and for laying 6,000 ft. of cast-iron water mains. I. D. Wolfe, Cy. Clk.

HOUGHTON, MICH.—The question of issuing $60,000 in bonds for a better water supply is being considered. City Clerk Brand may be addressed.

MOUNT CLEMENS, MICH.—The question of securing an increased water supply is being considered.

CHICAGO, ILL.—Bids are asked until April 7 for furnishing and delivering at the site of the Kedzie Ave. tunnel 14 flanged cast-iron water pipe specials, each 36 ins. diameter, together with certain channel beams, plates and bolts. L. E. McGann, Comr. Pub. Wks.

FINLEY PARK, ILL.—Bids are asked until April 15 for furnishing materials and for constructing works. P. R. Fletcher, Engr., 321 Western Ave., Blue Island, Ill., or 501 Bedford Bldg., Chicago; Wm. Funk, Clk.

SHELBYVILLE, ILL.—The Shelbyville Water Co., it is stated, will sink wells for a new water supply.

SULLIVAN, ILL.—We are informed that a standpipe will probably be built this summer. Population, 3,000. C. T. Hagerman, Cy. Engr.

GALESVILLE, WIS.—J. P. Dales, of the Western Engineering & Construction Co., Chicago, has submitted a proposition to put in works of 500,000 gallons capacity a day.

LA CROSSE, WIS.—Alderman Alfred James writes us that the council voted down the resolution to issue $15,000 in bonds for new mains. It is expected that the new council elected this spring will vote to issue bonds. Frank Powell, Cy. Engr.

LITTLE FALLS, MINN.—This place is reported to have voted in favor of municipal works. F. E. Hall, Cy. Clk.

SPARTA, MINN.—Jas. Dowling, Eveleth, Minn., is reported to have been awarded a contract for works, at $5,450.

TYLER, MINN.—W. J. Huddleston, Recdr., writes us that this place voted March 14 to issue $5,000 in bonds for works.

POMEROY, IA.—An election will be held April 10 to vote on the question of issuing bonds for works.

ELKPOINT, S. DAK.—This place will vote April 3 on the question of issuing $12,000 in bonds for works.

GOTHENBURG, NEB.—Geo. F. Anderson, Arch. and Contractor, writes us as follows regarding the proposed works: Nothing has been done further than the mass meeting, at which time it was proposed to vote at the coming election upon an 8-mill levy for the benefit of the hydrants and for the city. If the proposition carries then the town will want plans, and if the town is to build the works another vote for bonds will be taken. There is a company here which wants a franchise. Mr. Anderson wants prices on 4, 6 and 8-in. pipes and hydrants, a 60-ft. stand-pipe, gasolene engine, etc. Wells will have to be sunk about 50 ft. to water.

GRAFTON, NEB.—This place has been granted permission to build a standpipe, etc., to cost about $5,000.

NORTH BEND, NEB.—J. H. Johnson, Mayor, writes us that an election will be held April 14 to vote on the question of issuing bonds for works and an electric plant. Bids will probably be asked in April if the bonds are voted. Population, 1,300.

BUTTE, MONT.—Bids are asked until April 19 (postponement from April 8) for furnishing the materials and for extending the works of the Butte City Water Co., as described in our advertising columns. Eugene Carroll, Ch. Engr.

FORT PECK AGENCY, MONT.—Bids are asked until April 26 for constructing works and a sewerage system at the Indian agency. C. R. A. Scobey, U. S. Agent, Poplar, Mont.; W. A. Jones, Indian Comr., Washington, D. C.

NEOSHO, MO.—It is stated that this place has voted to issue $35,000 in bonds for municipal works.

NEVADA, MO.—We are informed that the contracts have all been let and the construction is nearing completion for the works and electric plant for the Missouri Water, Light & Traction Co. The work is being done by Quigley & Co.; the franchise was granted Sept. 26.

ST. LOUIS, MO.—We are informed that the following bids were received March 21 for furnishing three high-service pumping engines:

Lake Erie Engineering Works, Buffalo, N. Y.	$330,000
Holly Mfg. Co., Lockport, N. Y.	318,655
Southwark Fdy. & Machine Co., Philadelphia	350,000
The Edward P. Allis Co., Milwaukee, Wis.	272,000

BAIRD, TEX.—Bids are asked until 10 a. m., April 3, for constructing gravity works; check, $1,500. Arthur Yonge, Mayor, writes us that the water supply will be secured from wells 2½ miles from town. A storage reservoir of 225,000 gallons capacity will be built. The works will cost about $10,000. Murray Harris, Engr.

SHINER, TEX.—It is stated that the council has granted a 20-year franchise to Charles Welhausen, M. E. Wolters, C. L. Williams and J. C. Blohm for erecting and operating works. According to plans and specifications, a 50,000-gallon tank on a 75-ft. steel tower will be erected; contracts for the work will be let as soon as possible.

PRINEVILLE, ORE.—The works to be constructed by H. V. Gates, Hillsboro, Ore., will have 1,250,000-gallon pumps, 20 double hydrants, a reservoir, etc.

GREENVILLE, CAL.—Bids are asked until April 20 for constructing works and a sewerage system at the Indian school. E. M. Ament, Supt., Greenville; W. A. Jones, Comr. Indian Affairs, Washington, D. C.

PERRIS, CAL.—W. F. Bray, Secy. Subterranean Water Co., writes us that the company will put in a pump capable of elevating 1,000 gallons a minute to an elevation of 150 ft., and steam power to operate the same.

PLEASANTON, CAL.—Bids are asked until 3:30 p. m., April 3, for furnishing the materials and for constructing works. The construction must be completed June 1. G. L. Nusbaumer, Engr., Alameda; J. H. Neal, Clk.

SAN DIEGO, CAL.—The San Diego Land & Town Co. has gangs of well drillers at work making tests for a new water supply. Chief Engineer Savage has completed plans and specifications for five pumping plants to be put in at various points in the Sweetwater Valley, above and below the dam. The aggregate capacity of the plants will be about 5,000,000 gallons of water a day.

WHITTIER, CAL.—Bids are asked until April 3 for constructing new works, to cost about $19,225. W. E. Butler, Cy. Clk.

MONTREAL, QUE.—The water department has been allowed $81,556 for extending water mains, service pipes, repairing reservoirs, etc.

VERDUN, QUE.—Bids are asked until April 4 for laying water mains. McConnell & Marion, Engrs., N. Y. Life Bldg., Montreal; G. A. Ward, Secy.

ARNPRIOR, ONT.—It is stated that the proposed works for this place will cost about $39,000. The water will be brought a distance of about nine miles.

BELLEVILLE, ONT.—The executive committee has decided to recommend to the council to make an offer to the Belleville Water-Works Co. for the purchase of the works.

HINTONBURGH, ONT.—Bids are asked until April 15 for furnishing the materials and for constructing works as described in our advertising columns. C. H. Keefer, Consult. Engr., Ottawa; D. H. McLean, Reeve.

TORONTO, ONT.—C. H. Rust, Cy. Engr., in his estimates for the current year, has asked for $859,143 for the water-works department. This estimate includes the completion of the 6-ft. steel pipe between the bell-buoy crib and the shore crib, the construction of the trans-bay tunnel, a 36-in. main from Bathurst and College Sts. to the reservoir, new engine, etc.

NEW WESTMINSTER, B. C.—It is proposed to construct a dam at the intake, build a low-service reservoir, an 18-in. wooden conduit, and make other improvements to the works.

ROSSLAND, B. C.—H. B. Smith, Cy. Engr., has completed surveys for a water supply from Rock Creek. It is probable that money will soon be secured and the construction of the works begun.

VICTORIA, B. C.—Bids are asked until 4 p. m., April 4, for furnishing the city with a quantity of meters. W. W. Northcott, Purchasing Agent.

QUEENSTOWN, CAPE COLONY, SO. AFRICA.—It is stated that this place has borrowed $25,000 for works.

IRRIGATION.

JACKSON, CAL.—The Wildman-Mahony Co. proposes to construct another reservoir, according to reports.

LOS ANGELES, CAL.—A delegation composed of Messrs. Pirtle, Elliott, Lunt, Gray and Sullivan have presented a petition to the mayor for the establishment of a pumping plant in the river near Macy St. to furnish them water for irrigation.

SANTA ANA, CAL.—Arrangements are being made by the John T. Carpenter Water Co., of El Modena and the Serrano Water Co., of Villa Park, to sink a well 1,000 ft. deep on the Barham ranch, owned by the Santiago Farmers' Association, for the purpose of supplying water for irrigation in that section of the Santa Ana Valley.

YUMA, ARIZ.—The California Irrigation Co. has purchased 100,000 acres south of Yuma and proposes to construct an irrigation system next fall. L. H. Heber, Pres.; C. R. Rockwood, Engr. and Vice-Pres., both of New York.

MOUNT PLEASANT, UTAH.—The Twin Creek & Cedar Creek Reservoir Co. will complete its reservoir this year at a cost of about $15,000. C. M. Lund and L. C. Rasmussen, Directors.

NEW COMPANIES.—Mutchler Pumping Co., Jamison, Cal.; $5,500; canals for irrigation; W. L. Lowrey, L. M. Mutchler, of Jamison; J. G. James, San Francisco.

Farmers' Central Water Ditch Co., Woodland, Cal.; $2,000; to acquire and operate Farmers' Central Ditch and undivided half interest in Union Ditch; Thos. F. Dopking, E. S. Farnham, A. A. Merritt and 16 others.

Woodruff Irrigating Co., Randolph, Utah; $20,000; irrigating and reclaiming arid lands in Rich county; Geo. A. Neville, Pres.; Anson C. Call, Secy.; Benj. C. Walton.

Midland Canal & Land Co., Crowley, La.; $60,000; J. J. Randall, Pres., Decatur, Ill.; W. J. Naftel, Gen. Mgr.

Boise City Irrigation & Land Co., 243 Washington St., Jersey City, N. J.; $300,000; J. M. Satterfield, Charles N. King.

Abbott Bros. Canal & Improvement Co., Crowley, La.; $60,400; to construct canals, irrigation systems, etc.; Miron Abbott, Pres.; Martin D. Abbott, Secy. and Treas.

SEWERAGE.

CAMBRIDGE, MASS.—Alderman Spalding has introduced a resolution authorizing the Mayor to engage a consulting engineer in regard to the new sewers to be built at a cost of $400,000.

CONCORD, MASS.—Bids are asked by the sewer commissioners until April 10 for constructing a system, as described in our advertising columns. Leonard Metcalf, Engr., 89 State St., Boston.

SOUTHBRIDGE, MASS.—Waring, Chapman & Farquhar, 874 Broadway, New York, have submitted plans for the proposed system. By a typographical error this item was noted in our issue of March 16 under Woodbridge.

GREENWICH, CONN.—S. E. Minor, Borough Engr., writes us that the following bids were received March 20 for constructing sewers: John O. Merritt, Port Chester, N. Y., $10,335 (accepted); Jas. J. Horan, Stamford, $11,428; Joe Christiano, $11,895; Daniel Murray, Port Chester, $12,968; Larsen Bros., $13,011; Wm. T. Ritch, $18,718. The specifications call for 15-in. pipe, 4,230 ft.; 12-in. pipe, 1,505 ft.; 10-in. pipe, 2,515 ft.; 8-in. pipe, 530 ft.; 140 6 × 15-in. Y's; 50 6 × 12-in. Y's; 100 6 × 10-in. Y's; 20 6 × 8-in. Y's; 34 manholes, complete; 1 drop manhole, complete; 16½ tons iron pipe; ½ ton special pipe casting; rock excavation, 1,200 cu. yds.; broken stone, 150 yds.; concrete, 30 yds.; 1 flushing inlet, complete. No contract for sewer work in this place was let to J. J. Horan, as reported in our issue of March 16.

ALBANY, N. Y.—Bids are asked until April 3 for constructing sewers and paving in Howard and William Sts. T. J. Lanahan, Clk. Bd. Contract.

BUFFALO, N. Y.—Thos. F. Moore submitted the lowest bid March 22 for constructing sections 1 and 2 of the Emslie St. sewer at $72,400 and $12,500, respectively. W. F. Boysen submitted the next lowest bid at $67,900 and $17,400, respectively, for sections 1 and 2.——W. G. Smith has been awarded the contract for building a 3½ and 2¼-ft. brick and 12-in. pipe sewer in Bryant St. and Ashland Ave., at $7,893.

BUFFALO, N. Y.—Bids are asked until April 5 for constructing 5 ft. 4 in. to 2 ft. 9 in. brick and 24 to 10 in. pipe sewers in several streets. R. G. Parsons, Secy. Bd. Pub. Wks.

CHARLOTTE, N. Y.—This place has voted to extend the sewers in Strohm and Wilder Sts. F. Goulding, Pres.

NEW ROCHELLE, N. Y.—Bids are asked until April 3 for constructing a drain. Andrew J. Seiz, Village Clk.

SARATOGA SPRINGS, N. Y.—Prof. Olin H. Landreth, Schenectady, N. Y., has submitted a preliminary report on the sewage disposal of this place. A separate system is recommended at a cost of about $75,000.

BAYONNE, N. J.—Bids are asked by the city clerk until April 18 for constructing a trunk sewer in the Centreville section of Bayonne.

JERSEY CITY, N. J.—Bids are asked until April 4 for constructing about 1,200 ft. of 18-in. pipe sewers, etc., and until April 12 for constructing 2,400 ft. of 36 and 30-in. brick, 498 ft. of 18-in. vitrified and 3,120 ft. of 54 and 36-in. cast-iron pipe sewers, etc., for the main sewer in the Hudson City district. The work will include about 2,500 cu. yds. of rock excavation, 50 yds. of concrete, 200 yards of brick masonry, 21,000 ft. of piles driven, 40,000 ft. B. M. capping, 57,000 ft. B. M. flooring, etc. J. S. Nolan, Chn. Com.; G. T. Bouton, Clk. Comrs.

CHAMBERSBURG, PA.—Koontz & Son, Kingston, Pa., have been awarded the contract for building the system at about $35,000; the city will furnish the materials, according to reports.

LEBANON, PA.—It is proposed to construct sewers and pavements in a number of streets.

SCRANTON, PA.—Dunn Bros. will begin the construction of the South Side sewer on April 1. It will cost about $33,000. Other sewers will be built this year at a cost of about $55,000. J. P. Phillips, Cy. Engr.

WILKES-BARRE, PA.—This city will vote May 9 on the question of issuing $100,000 in bonds for sewers, paving, etc. Mayor Nichols may be addressed.

BALTIMORE, MD.—New bids will probably soon be asked by the city commissioners for furnishing two lots of 24-in., and one lot of 30-in. sewer pipe.

WASHINGTON, D. C.—Bids are asked by the district commissioners until April 8 for constructing sewers.

CORINTH, MISS.—Bids, it is stated, will soon be asked for constructing a system and water-works to cost about $40,000. Sanders & Porter, Engrs., Louisville, Ky.

CAMBRIDGE, O.—The council has passed resolutions for the construction of storm sewers in four streets. Sizes, 12 ins. to 30 ins.; estimated cost, $8,592; length, 6,281 ft. O. M. Hoge, Cy. Engr.

CHILLICOTHE, O.—City Engineer Redd has submitted estimates for three new sewers to be 2,700 ft., 2,200 ft. and 3,300 ft. long, respectively, and to cost $2,100, $3,000 and $3,960, respectively.

CLEVELAND, O.—Plans have been prepared for about 107 new sewers to be built this summer.——Herman Lehman submitted the lowest bid, at $18,307, for building the Chatham St. sewer. Mr. Lehman has the contract for building the Tod St. sewer at $10,849.

DAYTON, O.—A hearing will be given April 4 on the question of constructing sewers in District No. 5.

EAST LIVERPOOL, O.—Bids are asked until April 4 for constructing about seven miles of pipe sewers in district No. 2. J. A. George, Engr.; F. H. Croxall, Secy.

EAST LIVERPOOL, O.—Lyth & Sons, Wellsville, O., have submitted the lowest bid for furnishing sewer pipe for District No. 2 at $3,150.

TOLEDO, O.—Bids are asked until April 3 for constructing pipe sewers in a number of streets. W. O. Holst, Cy. Clk.

AUBURN, IND.—J. J. Van Auken, Cy. Engr., writes us that specifications for 55,000 ft. of 36 to 6-in. pipe sewers, average cut 10 ft. and to cost $30,000, will be ready in about 30 days. The contract will be let in about 60 days. Funds will be raised under the provisions of the Barrett Law.

FORT WAYNE, IND.—The residents of South Wayne are urging the construction of sewers this summer.

GOSHEN, IND.—Bids are asked until April 15 for reconstructing 7,000 ft. of 24 to 10-in. pipe sewers, paving, etc. I. D. Wolfe, Cy. Clk.

INDIANAPOLIS, IND.—The board of works has adopted resolutions for a Fall Creek intercepting sewer and for a sewer to be known as the Michigan St. sewer. The former will start at Senate Ave. and Fall Creek and extend to Meridian St. along the north side of the creek, with a branch across 24th St. to Northwestern Ave. It will be of pipe. The Michigan St. sewer will extend from the first alley east of Dorman St. to Temple Ave., with many branches. It will be made of brick and pipe. Another sewer called the Polk St. sewer will extend from the beginning of the Michigan St. sewer to Oriental St.

LAKE LINDEN, MICH.—The village president writes us that this place voted on March 13 against issuing $30,000 in bonds for sewers.

PONTIAC, MICH.—W. J. Fisher, Cy. Engr., writes us that the following bids were received March 24 for constructing certain sewers:

Bidder.	Mill St. 870-ft. 10&12-in. pipe.	Bagley St. 830-ft. 10-in. pipe.
Liphardt & Winterhalter, Detroit, Mich.	$1,207	$1,328
Stevenson & Finane, Port Huron, Mich.	1,216	1,378
John A. Mercier, Detroit, Mich.	1,294	1,433
John J. Granville, Saginaw, Mich.	1,305	1,500

HUDSON, WIS.—The question of issuing bonds for a system will be voted upon at the election April 15, according to reports.

MINNEAPOLIS, MINN.—Bids are asked until March 31 for constructing sewers during the season of 1899. L. A. Lydiard, Cy. Clk.

SAUK CENTRE, MINN.—Bids are asked until May 3 for constructing the system, as stated in our advertising columns. J. F. Cooper, Cy. Clk.

COLUMBUS, NEB.—The Columbus East End Sewer Co. has been incorporated with a capital stock of $5,000 by Sister Henria Stinn, Sister Fulgentia Frisch and others.

OMAHA, NEB.—The residents of the north side are urging the construction of sewers there to cost about $100,000. The council, however, has appropriated but $50,000 for sewer work throughout the city this year. Of this amount it is likely that about $25,000 will be used for the north side. Andrew Rosewater, Cy. Engr.

LEAD, S. DAK.—Mason Tyler, Cy. Audr., writes us that the council will be ready in a few days to ask for bids for constructing a main sewer. It will be three-quarters of a mile long and will cost $26,000. Andrew Rosewater, Engr., Bee Bldg., Omaha, Neb.

FARGO, N. DAK.—S. F. Crabbe, Cy. Engr., writes us that plans and specifications are being prepared for 5,300 ft. of 36-in. brick sewers.

FORT PECK AGENCY, MONT.—Bids are asked until April 26 for the materials and for constructing a system and water-works at the Fort Peck Agency. W. A. Jones, Comr. Indian Affairs, Washington, D. C.

KANSAS CITY, MO.—The Westport Improvement Association is urging the construction of the Mill Creek sewer.——City Engineer Wise has submitted plans for the Turkey Creek sewer to cost $20,000. The plan contemplates the straightening out of the sharp bend in the creek for a distance of 800 ft. and carrying it a distance of 200 ft. west of Fairmount Ave. The earth excavated from the new channel will be used to fill in the old and abandoned channel of the creek. The length of the sewer will be 1,200 ft.

INDEPENDENCE, MO.—Bids will probably soon be asked for constructing a system. Andrew Rosewater, Engr., Omaha, Neb.

WEBB CITY, MO.—The question of building a sewer to cost $7,500 is again being considered.

CLEBURNE, TEX.—The Cleburne Sewer Co. has been incorporated with a capital stock of $30,000, to construct, maintain and operate a sewer in Cleburne; incorporators: E. T. Kelly, P. Chambers and D. T. Chambers.

HOUSTON, TEX.—Bids are asked by the city treasurer until April 4 for the purchase of $100,000 5% paving and sewer bonds; no bid under 110, nor written or sealed bids will be considered.

SEATTLE, WASH.—Bids will be asked at once for constructing 28,000 ft. of new sewers in the East Dennyway, Harrison St., etc., at a cost of about $50,000. It is proposed to construct at once sewers in the Black Chapel district.——The following bids were received March 15 for constructing a sewor on 7th Ave. North: F. McLellan (accepted), $11,025; T. Ryan, $11,310; E. T. Smart & Co., $11,176; J. W. Fitts, $11,893; Stirrat & Goetz, $11,726; P. Costello, $12,594.

MEDFORD, ORE.—Bids are asked by the city clerk until May 15 for furnishing the pipe and for constructing a system.

HAYWARDS, CAL.—It is stated that town trustees have let a contract to Meek Bros., of San Leandro, Cal., for utilizing the sewage for fertilizing purposes for five years.

NEVADA CITY, CAL.—An election will probably be held in May to vote on the question of issuing bonds for a system to cost about $27,631. Engineers W. F. Englebright and Siminton, Nevada City, have submitted a preliminary report.

SACRAMENTO, CAL.—M. J. Desmond, Cy. Clk., writes us that an election will be held in about six weeks to vote on the question of issuing bonds for sewers. Probably it will be six months before bids are asked for the work.

SAN CARLOS AGENCY, ARIZ.—Bids are asked until April 18 for constructing sewers, water-works, etc., at this agency. W. A. Jones, Comr. Indian Affairs, Department of Interior, Washington, D. C.

WALLACE, IDAHO.—An election will be held April 4 to vote on the question of issuing $18,000 in bonds for a system.

VERDUN, QUE.—Bids are asked until April 4 for constructing brick and pipe sewers for the proposed system. McConnell & Marion, Engrs., 308 New York Life Bldg., Montreal; Geo. A. Ward, Secy.

OTTAWA, ONT.—Bids are asked until April 14 for constructing 4,430 ft. of 7-ft. and 7,741 ft. of 6-ft. circular brick sewer, and 1,860 ft. of 5 ft. circular steel pipe. Average depth of cutting 20 ft. through earth and rock. This is another section of the main trunk sewer to cost about $425,000, the contract for building one section of which was let recently to Jos. Bourque, Hull, Que., at $127,000, as noted in our issue of March 9. The entire system, including the main line, will cost about $1,000,000. John Galt, Cy. Engr.; S. J. Davis, Chn. Com.

PEMBROKE, ONT.—Bids will probably be asked soon for building sewers to cost about $10,000, according to reports. A. J. Fortier, Town Clk.

TORONTO, ONT.—C. H. Rust, Cy. Engr., has asked for an appropriation of $10,000 for preparing plans and for employing experts for the proposed improvements to the sewage disposal methods.

GARBAGE DISPOSAL—STREET CLEANING

FALL RIVER, MASS.—A contract has been let to Isaac E. Willetts, 37 South Main St., at $56,500, for collecting garbage for five years.

LOWELL, MASS.—John F. Murphy, Mgr. Lowell Garbage Reduction Co., has submitted a proposition to the board of health to collect and dispose of garbage and refuse matter for a term of five years, at $27,000 a year.

BINGHAMTON, N. Y.—Three members of the board of street commissioners have visited Buffalo and Rochester to investigate asphalt pavement cleaning methods.

BINGHAMTON, N. Y.—Bids are asked until April 15 for sprinkling the streets, hauling ashes, etc., at the U. S. public building here. J. H. Roberts, Custodian.

BUFFALO, N. Y.—The Thackeray Co. has been incorporated, with a capital stock of $200,000, to operate incinerators. The directors are: C. F. Jewett, J. W. Welch, J. H. Snow and two others, of New York.

WASHINGTON, D. C.—Bids are asked by the district commissioners until April 10 for sprinkling, sweeping and cleaning the streets, alleys, etc., by hand and by machine, etc., as stated in our advertising columns.

STREETS AND ROADS

BOSTON, MASS.—Bids are asked until March 31 for 500,000 Philadelphia size paving blocks, and until April 1 (re-advertisement) for furnishing bank gravel and sand from April 1 to Feb. 1, 1900. Benj. W. Wells, Supt. Sts. ——Bids are asked until April 3 for paving the roadway of the bridge on Summer St. extension. Wm. Jackson, Cy. Engr.

BOSTON, MASS.—The mayor has signed an order passed by the board of street commissioners March 24 for the laying out of Atlantic Ave. extension and for the construction of a bridge over the tracks of the Terminal Co., to South Boston.

HOLYOKE, MASS.—We are informed that the board of public works is in the market for about 1,000 lin. ft. of curbing. Address Oscar C. Ferry.

LYNN, MASS.—It is reported that Superintendent Tarbox, of the Highway Dept., has recommended the purchase of a new portable stone crusher, at about $2,500, and to sell the old one.

MALDEN, MASS.—The aldermen have passed bills appropriating $10,000 for new streets and $5,000 for sidewalks.

MERIDEN, CONN.—The board of public works has voted to pave Colony St. with asphalt at a cost of about $11,000. Bids will be asked in about two weeks. Wm. S. Clark, Cy. Engr.

MIDDLETOWN, CONN.—The question of macadamizing the streets at an estimated cost of about $75,000 is being considered by the council. Joseph Merriam and Walter B. Hubbard are on the committee. The same item in our issue of last week under Middletown, Vt., was a mistake.

NEW BRITAIN, CONN.—About $17,500 has been appropriated for macadamizing this year. W. A. Towers, St. Comr.

BROOKLYN, N. Y.—Bids are asked by the department of parks, Arsenal, Central Park, until April 6 for furnishing asphalt tiles, Hudson River gravel, crushed blue limestone, crushed traprock, shale sandstone screenings and for grading and paving with Telford the Bay Ridge Parkway terminus.

BUFFALO, N. Y.—Bids are asked until April 5 for resurfacing portions of Church St., Good St., Taylor Place and Josie Place, with sheet asphalt. R. G. Parsons, Secy.

COLDEN, N. Y.—Bids are asked by W. E. Hoyt, Ch. Engr., Buffalo, Rochester & Pittsburg Ry. Co., Rochester, until April 15 for constructing 1,800 lin. ft. of highway and for constructing a new channel for the west branch of Cazenovia Creek.

NEW YORK, N. Y.—Bids are asked by the department of highways, 150 Nassau St., until April 4 for grading and asphalt paving on concrete, on Pacific St., Brooklyn; also for grading, curbing, flagging sidewalks and crosswalks, in 233d St., Borough of the Bronx.

CAMDEN, N. J.—The council has passed an ordinance to issue $50,000 of 4% bonds for paving.

JERSEY CITY, N. J.—Bids are asked until April 4 for about 9,849 sq. yds. of Belgian block paving, 5,410 sq. yds. of asphalt, grading, etc. Geo. T. Bouton, Clk. Bd.

MORRISTOWN, N. J.—Bids are asked until April 10 for macadamizing a section of road, according to reports. Merritt B. Lum, Dir. Bd. of Freeholders.

NEWARK, N. J.—The board of street and water commissioners has passed resolutions to pave portions of 17 streets, with asphalt and granite block. Wm. E. Greathead, Clk.

BRADFORD, PA.—P. B. Winfree, Cy. Engr., informs us that bids will be asked in May, for brick paving.

ERIE, PA.—An ordinance will probably be presented to the council soon after April 1 for about 8,800 sq. yds. of sheet asphalt paving on Fifth St. About 7,000 sq. yds. of brick paving will be laid this season on Holland St.

MAHONOY CITY, PA.—The council is contemplating the paving of about 20,000 sq. yds. with brick this season, and will probably ask bids in about one month. M. D. Bowman, Borough Engr.

SHAMOKIN, PA.—Bids will be asked about April 15 for about 17,000 sq. yds. of brick paving on Sunbury and Shamokin Sts.

PETERSBURG, VA.—Bids are asked until April 15 for 2,500 yds. of granite block and 12,300 yds. of brick paving, as stated in our advertising columns. W. H. Talley, Chn. Com.

GRAHAM, N. C.—Lewis H. Holt, County Surv., informs us that the question of issuing bonds and awarding contracts for road improvements will probably be voted upon next August.

WADESBORO, N. C.—Reports state that an election will be held May 2 to vote on the question of issuing $25,000 of bonds for the improvement of county roads. S. A. Benton, County Clk.

ATLANTA, GA.—The council has agreed to lower the streets about five feet under the railroad at Whitehall, Prior and Lloyd Sts.——The street committee has recommended the macadamizing of portions of 13 streets.

GADSDEN, ALA.—J. H. Lovejoy, Judge of Probate, informs us that there will be an election July 3 to vote on the question of issuing $100,000 of bonds for road improvements.

KNOXVILLE, TENN.—The board of public works has been asking bids for macadam, according to reports.

BUCYRUS, O.—A proposition will soon be voted upon to improve portions of 13 roads, aggregating about 70 miles, at a cost of about $2,000 a mile.

HAMILTON, O.—J. W. Williams informs us that it is proposed to pave about one mile with sheet asphalt within a few months.

HICKSVILLE, O.—The council has decided to pave about one-half mile of High St.

SANDUSKY, O.—A resolution has been passed by the council to pave North Depot St. with either brick, sheet asphalt or block asphalt. John E. Stang, Chn. Com.

CONNERSVILLE, IND.—It has been resolved by the council to grade and gravel on six streets. Thos. J. Clark, Mayor; W. F. McNaughton, Clk.

CROWN POINT, IND.—Bids are asked by the board of county commissioners until April 13 for constructing about 45 miles of macadam and 22 miles of gravel roads, as stated in our advertising columns. Michael Grimmer, County Audr.

GOSHEN, IND.—Bids are asked until April 15 for grading, curbing and brick paving on five streets. I. D. Wolfe, Cy. Clk.

MARION, IND.—Bids are asked until April 4 for improving three alleys. Cyrus G. Robbins, Cy. Clk.

ROCKPORT, IND.—Old township has voted to issue $43,000 of bonds for the construction of 36 miles of macadam roads.

SCOTTSBURG, IND.—Surveyors and viewers are preparing plans for improving 26 miles of roads in Lexington township and for 15 miles of road in Jennings township.

SOUTH BEND, IND.—Bids are asked until April 10 for brick paving on two streets, according to reports. L. A. Hull, Cy. Clk.

SULLIVAN, IND.—Joseph Chart, Vevay, Ind., has been awarded a contract, at $57,400, for constructing 18 miles of gravel roads.

VERNON, IND.—Chas. W. Miles, Comr., San Jacinto, writes us that the county commissioners have appointed an engineer and viewers on 8 miles of proposed macadamized roads in Bigger township and an engineer and viewers on 11½ miles in Campbell township. The survey and estimates will be made at once. The law allows the issuing of bonds to an amount equal to 4% of the assessed value of the property in the township. Bonds to the amount of $10,160 can be issued for the improvement of roads in Bigger township, and in Campbell township $19,360. Bonds run from six months to 20 years, interest 4½%, payable semi-annually. Wm. B. Prather, Comr.

WABASH, IND.—Bids are asked until April 10 for grading, combined cement curb and gutter and asphalt paving on three streets and for improving the sidewalks on Elm St. Fremont McLees, Cy. Clk.

BATTLE CREEK, MICH.—A bill has passed the legislature to permit the city to submit to the voters the proposition to increase the paving bonds from $30,000 to $50,000.

CHICAGO, ILL.—The board of local improvements has ordered estimates to be prepared for the paving of Grand Ave. from Union to Noble St.

MILWAUKEE, WIS.—Asphalt paving to cost about $75,000 is to be laid this season in the section of the city bounded by Folsom Place, Burleigh Boulevard, Cramer and Frederick Sts.

FARGO, N. DAK.—The council has awarded a contract to James Kennedy, for paving to cost about $38,000.

ST. PAUL, MINN.—The two lowest bids for paving Washington St. with asphalt were submitted by Hennessy & Cox, at $10,595, and the Warren-Scharf Co., at $10,605.

KANSAS CITY, MO.—The park board has approved plans for laying out Armour Ave.

MOBERLY, MO.—H. V. Estill, Supt., writes us to correct the item in our issue of March 16. Brick curbing was laid at a cost of 12½ cts. per lin. ft.

SEDALIA, MO.—The council has decided to ask bids for a rock crusher.

PUEBLO, COLO.—J. B. Orman, Mayor, informs us that nothing has yet been done toward securing plans, appropriating money or awarding contracts for paving the streets and alleys.

PETALUMA, CAL.—N. S. Frost, Cy. Engr., writes us that bids will be asked by the city clerk about May 1 for two blocks of artificial stone sidewalk and 650 ft. of 6-in. pipe sewer.

HAMILTON, ONT.—City Engineer Barrows has reported to the board of public works that all the main block paved thoroughfares require repaving.

HAVANA, CUBA.—Reports state that Hugh J. Riley, 31 Broadway, New York, has been awarded a contract to finish the old Taylor contract for paving, grading, draining and curbing about 30 miles of streets in Havana, Cuba. According to reports, it will require 50,000,000 paving blocks and 1,000,000 sq. yds. of flagging.——It is reported that specifications for 100,000 cu. meters of broken stone for macadam will be given out by the engineer corps some time next week. The contractors will be obliged to deliver the stone at the rate of 400 meters per day. There is a quarry 30 miles from here, but between $70,000 and $100,000 worth of machinery would be required to place the stone in this city. The stone will therefore have to come from the United States.

MANUFACTURING PLANTS.

WINSLOW, ME.—Reports state that the Hollingsworth & Whitney Co. has decided to increase its capital to $4,000,000 and to double capacity of its paper mills. This will give it a daily output of 75 tons of paper.

WORCESTER, MASS.—It is reported that the Washburn & Moen plant of the American Steel Wire Co. will erect an independent steel plant at Quinsigamond, Worcester, to produce all the steel required by the Worcester works.

WOONSOCKET, R. I.—Reports state that August Le Poutre, Roubaix, France, and Andre Simones, Verviers, Belgium, are interested in a new yarn mill to be erected at Woonsocket; estimated cost, $200,000. C. R. Makepeace, Arch., Providence, R. I.

TORRINGTON, CONN.—Reports state that Capt. James McL. Murphy, inventor and projector of the new safety third-rail system, is negotiating for the purchase of the Turney & Seymour Mfg. Co.'s plant to be used for the building of his cars and apparatus.

TROY, N. Y.—The Troy Malleable Iron Works are to build an addition to its present foundry, 300 × 70 ft.; estimated cost, $25,000. M. F. Cummings & Son, Archs., Times Bldg., Troy.

ALLEGHENY, PA.—The directors of the D. Lutz Brewing Co. are reported to have decided to increase the capital stock from $800,000 to $1,200,000, so as to increase the capacity of the plant from 150,000 to 300,000 bbls. a year.

ATCO, PA.—The buildings of the Atco Glass Works were partially destroyed by fire March 13. Estimated loss, about $35,000; partly insured.

BRADFORD, PA.—Van Cleve & Palmer, Cleveland, O., are reported to have been awarded the contract for the erection of a 48-blower tank window glass factory near Bradford.

PHILADELPHIA, PA.—Plans have been prepared for a new 5-story building, 36 × 95 ft., to be erected at Vine and Orianna Sts. for Chas. E. Brown, printer of stamps and dies. J. Franklin Stuckert & Son, Archs.

WILMINGTON, DEL.—The Arlington Mills, of Wilmington, will be sold at auction April 8, including about 15,000 spindles, 600 looms, a dye-house, and all accompanying machinery necessary for the manufacture of colored cotton goods. George S. Capelle, Receiver.

CHESTER, W. VA.—W. N. Voegtly and C. W. Tyndall, formerly of the Pittsburg Tin-Plate Co., will erect a shot mill to cost $250,000, according to reports.

GREENSBORO, N. C.—Ladshaw & Ladshaw, Archs., Spartanburg, S. C., inform us that they are preparing plans for two cotton mills for Messrs. Mebane. Contracts will be let about April 15.

TALLASSEE, ALA.—Reports state that the Tallassee Falls Mfg. Co. will make extensive improvements to its present mill. An entirely new mill will be erected, consisting of a 450 × 128-ft. building, a picker-house, and a power house. New dams are also being constructed.

CASTALIA, O.—The Castalia Portland Cement Co. will erect a $250,000 plant at Castalia, according to reports. Contracts for an iron and steel building have been let.

CLEVELAND, O.—The plant of the Dangler Stove Mfg. Co. was destroyed by fire March 20; reported loss $300,000. The Cleveland machine screw plant was also damaged to the extent of $50,000.

KALAMAZOO, MICH.—Hauser, Hayden & Owen Co., Grand Rapids, Mich., has the contract for the erection of a 5-story brick and steel building in Kalamazoo, for the beet sugar company; estimated cost of building, $100,000.

CHICAGO, ILL.—The works of the Armour Curled Hair & Felt Co., at 32d St. and James Ave., were destroyed by fire, March 27; reported loss, $250,000, fully insured.

LONDON, ONT.—The Wortman & Ward Co. are reported to have decided to build a new 3-story factory building at William and York Sts.

HALIFAX, N. S.—A newly organized steel and iron company, composed of H. F. Dimock and Almeric Paget, of New York, and others, interested in the Dominion Coal Co., is said to have received an important government coal concession on condition that a $3,000,000-plant be erected.

MANCHESTER, ENGLAND.—Reports state that the English Linotype Co. is about to erect a large additional plant to manufacture printing machinery at its works at Broadheath, near Manchester. W. J. Lewis and F. J. Wick, Engrs., are now in this country looking up machinery, etc.

GAS PLANTS.

BROCKTON, MASS.—Bids are asked until April 8 for street lighting by about 200 to 400 ordinary gas lights, 200 to 300 60-c. p. Welsbach lights, and 100 to 250 60-c. p. naphtha lights. Frederick L. Smith, Chn.; Geo. H. Ackerman, Clk. of Com.

SPRINGFIELD, MASS.—Reports state that the Springfield Gas Light Co. proposes to construct a gas holder of about 1,000,000 cu. ft. capacity on Walker St.

PROVIDENCE, R. I.—The Providence Gas. Co. will construct a three-story brick building, 176 × 40 ft., to be used for offices and gas purifiers, and a building, 110 × 65 ft., as a retort house. Additions are also to be made to the gas holder house on Federal St., according to reports.

HARTFORD, CONN.—Joseph Dawson, Cy. Marshal, informs us that the petition of a private company for a charter for a new gas plant has not passed the legislature, and probably will not.

BUFFALO, N. Y.—L. L. Merrifield, 269 Frost St., Toronto, Ont., of the Economical Gas Construction Co., has completed plans for the proposed municipal gas plant; estimated cost of plant, $875,000, mains and district gas holders, $1,500,000, according to reports.

NEW ROCHELLE, N. Y.—A public hearing will be given April 3 on the application of the Westchester Gas & Coke Co. for a franchise to lay mains and supply gas.

TUCKAHOE, N. Y.—The Westchester Gas & Coke Co. has been granted a 99-year franchise to lay mains and construct storage tanks in this town.

TUCKERTON, N. J.—A. L. Wares informs us that the Pohatcong Tribe I. O. R., desires information regarding acetylene gas for lighting their hall at this place. Wm. Maulsburg, Chn. Com.

ATHENS, PA.—The Athens & Sayre Gas Co. is preparing plans for the construction of its new plant. W. H. Fritchman, Engr.

RICHMOND, VA.—W. P. Knowles, Supt., has submitted a report to the committee recommending the following improvements for the new city gas plant: A new boiler and engine room; an additional 30-HP. horizontal engine and two high pressure blowers and heater, to cost about $17,000; enlarge the coal plant and install one Root No. 6 gas exhauster and engine, to cost about $4,000; replace the four boxes in the old purifying house with two large boxes; remodel the coal gas plant, and in place of the present benches erect improved regenerative furnaces or incline retorts of 1,500,000 cu. ft. capacity, daily, two multitubular water condensers of 1,000,000 cu. ft. capacity, and extend the 24-in. main.

AUGUSTA, GA.—Judge C. O. French, of Sandusky, O., who is now staying at the Bon Air Hotel, Augusta, has applied to the council for permission to build a plant.

NASHVILLE, TENN.—A bill has been introduced in the council to grant a franchise to the Tennessee Gas Co., to construct and operate gas works, to cost about $300,000.

COLUMBUS, O.—The Federal Gas & Fuel Co. has applied to the council for a franchise to pipe natural gas. D. H. Kimberley, Pres.

FINDLAY, O.—The water-works board is considering a proposition to drill a gas well near the pumping station.

LONDON, O.—Reports state that the gas company of this place has decided to construct a new plant. W. M. Jones, Pres.; J. J. Clark, Secy.

VANWERT, O.—Reports state that Wm. T. Morris and J. B. Bradley, of Penn Yan, N. Y., have purchased the plant of the Vanwert Gas Light Co. and will enlarge the generating capacity.

CHICAGO, ILL.—Bids will be asked by City Electrician Ellicott for a system of lighting as soon as the bill appropriating $400,000 is passed by the council. Mr. Ellicott, according to reports, has put the Welsbach Street Lighting Co. of America under bonds that its bid for furnishing and maintaining gas light as the city may elect will not exceed a fixed amount. This company has made a contract with the People's Gas Light & Coke Co., of

Chicago, under which the city will deal directly with the Welsbach company for the supply of gas light. The company will install its burners free and make a charge for furnishing gas and maintaining light.

CORSICANA, TEX.—W. H. Staley and others have applied to the council for the privilege to manufacture gas.

COLORADO SPRINGS, COLO.—The Colorado Springs Light & Power Co. has purchased the property of the Colorado Springs Gas & Electric Co., according to reports. It is proposed to remodel the gas plant. I. W. Boubright, Pres.; Geo. R. Buckman, Secy. and Treas.

FAIRHAVEN, WASH.—The Billingan Bay Gas Co. will install a plant for the manufacture of gas from crude petroleum.

TORONTO, ONT.—The board of control has decided to ask bids for constructing a plant and mains to supply gas to the island.

NEW COMPANIES.—Delaware Gas Co., Easton, Pa.; $100,000. with $10,000 paid in; to manufacture and supply gas for light only, in Easton and West Easton; Arthur E. Childs, 224 Newbury St., Boston, Treas.; Alfred Clarke, Lowell, Mass.; Henry McKeen, Edward J. Fox, Easton.

Directors' Oil Co., Los Angeles, Cal.; $12,000; H. L. Chadwick, J. W. Brunton, Los Angeles; J. M. Hendrickson, Coalinga, and E. R. Snyder, Pasadena.

Golden Gate Petroleum Co., San Francisco, Cal.; $1,000,000; James English, Jerome Porter, P. B. Morrissey.

Camden Gas Co., Camden, N. Y.; $2,000; Chas. J. Williams and Wm. H. Dorrence, of Camden; Edwin P. Chapman, Jr., Oneida.

Short Creek Oil & Gas Co., Adena, O.; $10,000.

Warden Acetylene Gas Co., New York, N. Y.; $125,000; gas machines, etc.; D. R. Warden, Pittsburg, Pa.; E. J. Fenelon, 75 West 68th St.; F. A. Wunder, 161 W. 75th St.

Pointer Oil & Gas Co., Dennison, O.; $5,000.

Barr-Affotter Oil & Gas Co., Dennison, O.; $5,000.

Kirkwood Oil & Gas Co., Hendrysburg, O.; $10,000.

Central Natural Gas & Oil Co., Alexandria, Ind.; $5,000; C. L. Cree, A. E. Otto, W. R. Perry.

MISCELLANEOUS CONTRACTS.

PARK.—St. Paul, Minn.—The park board has passed a resolution to lay out a park at Lake Phalen.

BONDS.—Coburg, Ont.—Bids are asked until May 1 for the purchase of $144,000 of 4% bonds. Herbert Boggs, Chn.

QUARRYING.—Spokane, Wash.—Bids are asked by the United States Marble Co., Spokane, for quarrying 50,000 cu. ft. of onyx.

TELEPHONES.—Athens, Ga.—Chas. H. Phinizy and F. A. Lipscomb propose to construct a telephone system and exchange.

TELEPHONES.—Duluth, Minn.—A franchise has been granted to a company represented by R. H. Evans for a telephone system.

LUMBER, ETC.—Portland, Me.—Bids are asked until April 17 for lumber, iron, coal, etc. Maj. S. W. Roessler, U. S. Engr., 537 Congress St.

EXCAVATING.—New Orleans, La.—Bids are asked by the park commissioners, City Park, until April 3, for excavating certain lakes in the park.

TELEPHONES.—Utica, O.—The council granted a franchise March 9 to the Newark Telephone Co., Newark, O., for constructing an exchange.

TELEPHONES.—Scranton, Pa.—Frank E. Dennis, M. F. Morton, Julius Moses and others have applied to the council for a telephone franchise.

LEVEE AND TRACKS.—Memphis, Tenn.—A. T. Bell, Cy. Engr., has completed plans for a proposed levee and elevated tracks along the Mississippi River.

PIER.—Philadelphia, Pa.—The Philadelphia & Reading Ry. Co. has applied to the board of port wardens for the construction of a new pier at Port Richmond.

PORTABLE ASPHALT PLANT.—Paterson, N. J.—Cyril R. Forbes, 785 Main St., asks for the address of manufacturers of portable or railroad asphalt plants.

REPAIRING DREDGE.—Charleston, S. C.—Bids are asked until April 13 for repairing the dredge "Charleston." Maj. E. H. Ruffner, U. S. Engr., Charleston.

PARK WORK.—Grand Rapids, Mich.—The committee has approved plans submitted by W. L. Cukerski, Supt. of Parks, for park improvements to cost about $25,000.

DREDGING.—Cleveland, O.—Bids are asked until April 26 for dredging in Cleveland Harbor, as stated in our advertising columns. Col. Jared A. Smith, U. S. Engr.

TRAP-ROCK SCREENINGS.—New York, N. Y.—Bids are asked by the department of parks, Arsenal, Central Park, until April 6, for 500 yds. of trap-rock screenings.

CONDUITS.—Canton, O.—The council has passed an ordinance requiring the Central Union Telephone Co. to place all wires under ground. The contracts will soon be let.

PARK WORK.—Niagara Falls, Ont.—The Park Commissioners have presented their annual report to the legislature for authority to issue $25,000 of bonds, according to reports.

CIVIL ENGINEER.—Eau Claire, Wis.—The city invites correspondence and proposals for services of a civil engineer and surveyor, as City Engineer of the city. T. P. Cochrane, Cy. Clk.

DRY DOCK.—Buffalo, N. Y.—Reports state that the Detroit Dry Dock Co. proposes to construct a dry dock, 150 ft. long, to cost from $100,000 to $350,000, as an addition to its present plant.

COVERED DOCK.—San Francisco, Cal.—The harbor commissioners have adopted a resolution to have the chief engineer prepare plans for transforming Fremont St. wharf into a covered dock.

IRON WIRE.—Washington, D. C.—Bids are asked at the office of the chief signal officer until April 12 for furnishing about 1,000 miles of No. 9 iron wire, f. o. b. cars, New York city.

LEVEE WORK.—Illiopolis, Ill.—It is reported that Farris Norred, D. S. Correll and D. W. Peden, of Illiopolis, and E. R. Ulrich, of Springfield, will strengthen their levees along the Sangamon River.

DRAINAGE.—Winnipeg, Man.—It is stated that the provincial government has decided to construct 22 miles of main drains, connecting with the Joe and Rosseau rivers, in Franklin municipality, at a cost of $50,000.

DREDGING.—New York, N. Y.—Bids are asked until April 26 for dredging in Bay Ridge and Red Hook channels, New York Harbor, as stated in our advertising columns. Maj. H. M. Adams, U. S. Engr., Army Bldg.

STEEL BARGES.—Pittsburg, Pa.—Reports state that a company with $1,000,000 capital is being organized to construct steel barges for the Ohio River trade. Captain S. S. Brown and the Schultz Bridge Co. are said to be interested.

STEAM TUG.—New York, N. Y.—Bids are asked until April 11 for constructing a single-screw tug, 102 ft. long, 24 ft. beam and 9½ ft. draft; triple expansion engines of 900 HP.; appropriation, $45,000. Lieut.-Commander J. C. Fremont, 39 Whitehall St.

DRY DOCK.—Baltimore, Md.—Reports state that Harry Skinner, of Wm. Skinner & Sons, shipbuilders, is promoting a proposition to construct a dry dock, 600 ft. long, to cost about $200,000. Subscriptions amounting to $50,000 have been obtained.

HARBOR DREDGING.—New York, N. Y.—Bids are asked until April 24 for the deepening and widening of the East Channel to be 2,000 ft. wide, as stated in our advertising columns; appropriation, $4,000,000. Maj. H. M. Adams, U. S. Engr., Army Bldg.

TELEPHONES.—Ellsworth, Me.—It is reported that the New England Telephone & Telegraph Co. proposes to extend its line to Deer Isle, which includes Stonington; population, about 5,000. A. F. Jacobs, Supt. of Construction, Portland; Geo. H. Grant, Mgr., Ellsworth.

CANAL LOCKS.—Albany, N. Y.—Reports state that plans are on file with the state engineer for the proposed lift locks for the Erie canal at Cohoes; estimated cost, $900,000; and at Lockport, $500,000. The legislature has not yet made an appropriation. Chauncy U. Dutton, Engr.

DRY DOCK.—New Orleans, La.—Gerald Jordons and Robert C. Moris, Mgr., of the southern department of the National Association of Manufacturers, propose to organize a stock company, of $1,000,000 capital, to establish a steel dry dock and ship yards, according to reports.

BROKEN STONE.—New York, N. Y.—Bids are asked until April 28 for the purchase and removal of about 235,000 cu. yds. of broken stone, owned by the United States and stored near Spuyten Duyvil, as stated in our advertising columns. Maj. H. M. Adams, U. S. Engr.

GAS ENGINES, DYNAMOS, ETC.—Indianapolis, Ind.—Bids are asked by the board of regents of the state soldiers' and sailors' monument, 93 State Capitol, until April 5 for installing two 30-HP. gas engines, two jack shafts, two 25 K.-W. dynamos and one switch board. E. P. Thompson, Secy.

MINING PLANT.—Arizona.—The Helvetia Copper Co., of Boston, Mass., is about to purchase large quantities of machinery for its copper mining works in Arizona. This is a new company and its mines have hitherto been worked by hand power only. James B. Seager, Mgr.; F. B. Close, Engr.

CANAL WORK.—Buffalo, N. Y.—Senator W. F. Mackey introduced a bill in the legislature March 8 to authorize an appropriation of $5,000,000 for lengthening and widening, to 260 x 26 ft., the locks of the Erie Canal, and authorizing the state board of public works to perform the work before May 1, 1901.

TELEPHONE CONDUITS.—Baltimore, Md.—Bernard Carter, Counsel for the Chesapeake & Potomac Telephone Co., applied to City Commissioner Varney for a permit to lay conduits in a number of streets and alleys in the northwestern section of the city in continuation of the extension of the system.

IRON RAILING.—Boston, Mass.—The following bids were received by the city engineer March 16 for iron railing on the sea wall along Dorchester Ave.: George T. McLauthon Co., $2,427; W. A. Snow, $2,498; James Russell Boiler Works, $2,645; P. J. Dunn & Co., $3,100; Boston Bridge Works, $3,700.

DRAINAGE.—Bellefontaine, O.—Wilbur A. Ginn, County Engr., writes us that a survey has been ordered of a joint ditch improvement situated in Shelby, Auglaize and Logan counties. This improvement will be about 29 miles long and will drain about 90,000 acres of land, including the tributary ditches.

CHANNEL OR CUT-OFF.—El Paso, Tex.—B. S. Catlin, Cy. Clk., writes us that a contract has been awarded to Buchanan & Powers for a channel or cut-off across the bend in the Rio Grande River, one mile below this city. The plans were prepared by the international boundary commission. W. W. Follott and Jocabo Blanco, Engrs.

MASONRY.—Providence, R. I.—Bids are asked until April 7 for removing old bridging, constructing new river walls and extending pier northerly from the Exchange bridge; also for constructing new abutments at the site of the Mill St. bridge and a river wall southerly from Stevens St. bridge along Charles St., as stated in our advertising columns. Robert E. Smith, Comr. Pub. Wks.

CANAL WORK.—Oakland, Cal.—The board of public works received bids March 15 for canal work, as follows: Cotton Bros. & Co., gates, culverts and canal way complete, $18,900; and 17,000 ft. of piling, $5,950; J. A. Marshall, $16,902.40, and $3,778, respectively; Dundon Bridge & Construction Co., $21,863, and $5,440, respectively; Williams Bros., gates, $15,920; piling, $5,610.

TELEPHONE WORK.—Johnstown, Pa.—Reports state that the Johnstown Telephone Co. has decided to increase its capital stock from $15,000 to $100,000. The proposed improvements to the local lines will be commenced at once. It is intended to cable the lines throughout the city and connect with the independent companies operating in Somerset and Westmoreland counties.

TELEPHONE WORK.—Pittsburg, Pa.—Reports state that J. L. D. Speer, of the firm of J. L. D. Speer & Co., is in Baltimore perfecting the plans of the new telephone company for Pittsburg and its vicinity. The capital of the new company is said to be $30,000,000, and is backed by the Alexander Brown syndicate of Baltimore. Construction work between the two cities will begin as soon as all the stock is subscribed.

TELEPHONE LINE.—Pittsburg, Pa.—The Pittsburg & Allegheny Telephone Co. has awarded the contract for building the subway and conduits for its wires to Booth & Flinn, Ltd., Pittsburg. The company has filed a bond of $25,000 as a guarantee to build a line and place in operation in Pittsburg 1,200 telephones a year for the next three years. The line will cost about $2,500,000. Geo. R. Webb and Harry A. Parr, representing a Baltimore syndicate, are interested.

SALT WATER PIPES.—New York, N. Y.—Local papers state that the council has recommended that permission be granted the American Air-Power Co. to lay pipes under the streets, in order to convey salt water from the North River to its plant on 24th St., between 12th and 13th Aves. The pipes will run from the river, Pier 64, across 13th Ave., to the factory, and will be 16 ins. in diameter. The compressed air, which will be used to operate the 28th and 29th St. Ry. lines, has to be cooled.

NAVY YARD WORK.—Philadelphia, Pa.—Plans are being prepared by the bureau of yards and docks for the repair of the timber dock at the League Island navy yard; estimated cost, $60,000. Cement will be substituted for a large part of the timber structure.——Bids will soon be asked for the new dry-dock; appropriation, $800,000; according to reports.——About $100,000 is to be expended this year for constructing a sea wall around the reserve basin, $125,000 for dredging the basin and $113,000 for widening the entrance and causeway leading over the basin.

CEMENT, IRON BEAMS, ETC.—Baltimore, Md.—The following submitted bids March 10 for cement, iron beams, brick, lumber, etc., as advertised in Engineering News. Col. Peter C. Hains, U. S. Engr., 812 St. Paul St.: McClenahan & Bro. Granite Co., Port Deposit, Md.; Schwind Quarry Co., Baltimore; Philadelphia Transportation Lighterage Co., Philadelphia; Isaac S. Filbert, Baltimore; Lawrenceville Cement Co., New York; National Building Supply Co., Baltimore; B. Wallis & Co., Baltimore; Maryland Cement Co., Baltimore; Atlas Cement Co., New York; Baltimore High Grade Brick Co., Baltimore; Wm. D. Gill & Son, Baltimore; Jas. L. Gilbert & Bro., Baltimore; Morton, Reed & Co., Baltimore; Thompson C. Gill & Co., Standard Supply & Equipment Co., Philadelphia; Carnegie Steel Co., Pittsburg, Pa.; J. D. Mallory, Baltimore.

RIVER AND HARBOR BILL.

The following are the appropriations made by the 55th Congress for improvements to rivers, canals, creeks, etc., of the United States as consolidated in the River and Harbor Bill; the appropriations for improving the harboors were given in our issue of March 16.

MAINE.—Bagaduce River, continuing improvement, $3,000; Penobscot River, completing improvement, $28,000; Narragaugus River, completing improvement, $5,000; Lubec channel, continuing improvement, $25,000; George's River, continuing improvement, $10,000; Union River, continuing improvement, $15,000, provided that $115,000 additional may be appropriated for completion; Saco River, including breakwater, $5,000.

NEW HAMPSHIRE.—Cocheco River, continuing improvement, $20,000; Exeter River, completing, $12,000.

VERMONT.—Otter Creek, continuing improvement, $10,000; the Narrows of Lake Champlain, continuing improvement, $5,000.

MASSACHUSETTS.—Powow River, continuing improvements, $12,000; Taunton River, completing improvement, $7,000; Weymouth River, continuing improvement, $10,000; Essex River, completing improvement, $10,000; Mystic and Malden Rivers, continuing improvement, $5,000; Mystic River, below mouth of Island End River, $50,000; Town River, continuing improvement, $8,000; Merrimac River, continuing improvement, $40,000.

RHODE ISLAND.—Pawtucket River, continuing improvement, $30,000, a part to be used for straightening the channel between the mouth of Ten Mile River and Bucklins Island; Sakounet River, completing, $20,000.

CONNECTICUT.—Connecticut River, below Hartford, continuing improvement, $20,000; Housatonic River, continuing improvement, $15,000; Mystic River, completing improvement, $9,600; Thames River, continuing improvement, $20,000, provided that part be used to secure depth of water for anchorage purposes at Norwich, and that part be used to make a survey for improving harbor at New London; Pawcatuck River, R. I. and Conn., continuing improvement, $15,000.

NEW YORK.—Hudson River, continuing improvement, $100,000, provided that $500,000 may be used for completing the improvement, to include the locating and widening of a channel at and near Troy; Harlem River, continuing improvement, $100,000; East River and Hell Gate, continuing improvement, including removal of Man-of-War Rock, $250,000; Brown's Creek, Sayville, L. I., continuing improvement and maintenance, $3,000; shoals between Sister Islands and Cross-Over light, St. Lawrence River, continuing improvement, $25,000; Niagara River, from Tonawanda to Port Day, continuing improvement, $15,000; Bronx River, continuing improvement, $20,000.

NEW JERSEY.—Passaic River, continuing improvement, $15,000; Raritan River, continuing improvement, $20,000; Shrewsbury River, maintenance, $10,000; South River, continuing improvement, $5,000; Alloway Creek, continuing improvement, $3,000; Mattawan Creek, maintenance, $3,000; Shoal Harbor and Compton Creek, continuing improvement, $8000, to be expended for extending the improved channel further toward the 5-ft. contour of Raritan Bay; Goshen Creek, completing improvement, $8,000; Manasquan River, continuing improvement, $5,000; Rancocas River, continuing improvement, $2,000, to be expended in the Lumberton branch; Mantua Creek, $25,000, provided that no part of any money appropriated for this project in excess of $8,000 shall be expended for right of way privileges, easements or other rights above the phosphate works and below Paulsboro, and no part thereof shall be expended for any such purpose unless all such rights are secured for an amount not in excess of said sum of $8,000; Delaware River, from Trenton to its mouth, continuing improvement, $300,000, of which so much may be used as required between Trenton and Christian St., Philadelphia, and the balance to be available for obtaining a channel 600 ft. wide and 30 ft. deep from Christian St. to deep water in Delaware Bay; provided that the total cost of the work shall not be increased thereby. The secretary of war is authorized to appoint a board of three engineers to make a further examination of the project, and report such modification of the same as may be deemed desirable, with an estimate of the cost, the expense of such examination to be paid from the appropriation.

PENNSYLVANIA.—Allegheny River, continuing improvement, $15,000; Monongahela River, enlargement of Lock Six and extending existing fender, and mooring crib 300 ft. above Lock Three, building a deflecting dyke 1,800 ft. above the lock, new dredge boats and two dump scows, etc., $50,000, provided that $135,556 additional may be appropriated for completing the improvement.

DELAWARE RIVER.—Appoquinimink River, continuing improvement, $5,000; Smyrna River, continuing improvement, $5,000; Murderkill River, completing improvement, $5,000; Broad Creek River, completing improvement, $5,000; Mispillion River, completing improvement and for maintenance, $2,500; Nanticoke River, Del. and Md., continuing improvement, $3,000.

MARYLAND.—Choptauk River, continuing improvement, $8,000; Chester River, completing improvement, $3,200; Manokin River, continuing improvement, $1,500; Warwick River, continuing improvement, $2,000; Patapsco River and Channel to Baltimore, continuing improvement, $200,000, to obtain a 30-ft. channel, to complete, $1,000,000; Pocomoke River, continuing, $3,000.

DISTRICT OF COLUMBIA.—Potomac River, at and below Washington, $100,000, provided that $15,000 may be used for completing the improvement.

VIRGINIA.—Appomattox River, continuing improvement, $5,000; Nansemond River, continuing improvement, $5,000; James River, continuing improvement, $150,000; Norwini Creek, continuing improvement, $10,000; Deep Creek, from the south branch of the Elizabeth River to the new lock at the Dismal Swamp Canal, N. C., etc., $25,000, provided that $232,450 additional may be appropriated to complete the improvement; Rappahannock River, continuing improvement, $15,000; Urbana Creek, continuing improvement, $3,000; York River, continuing improvement, $10,000; Occoquan Creek, continuing improvement, $2,500; Lower Machodoc Creek, continuing improvement, $1,500; Nandua Creek, completing, $3,000.

WEST VIRGINIA.—Elk River, continuing improvement, the sums available for use above Frametown, Braxton county, to be used as far as may be necessary in removing snags, bowlders, etc.; Little Kanawha River, clearing obstructions and maintenance, $743; Guyandotte River, maintenance, $1,000.

NORTH CAROLINA.—North East River, maintenance, $2,000; Cape Fear River, above Wilmington, continuing improvement and maintenance, $5,000; at and below Wilmington, continuing improvement, $150,000; Contentina Creek, maintenance, including snagging, $2,000; Neuse River, maintenance, $10,000; Pamlico and Tar Rivers, continuing improvement and maintenance, $15,000; Trent

River, maintenance, $2,500; Black River, maintenance, $2,000; inland water route from Norfolk Harbor, Va., to Albemarle Sound, through Currituck Sound, continuing improvement, $8,000; Fishing Creek, completing improvement, $7,750; Town Creek, Brunswick county, channel 40 ft. wide at bottom and 5 ft. deep at mean low tide from the mouth to Upper Bridge, and to snag and remove obstructions from the creek from the mouth to Five Rocks, provided that no work be done until Upper Bridge has a proper dam, $8,500.

SOUTH CAROLINA.—Great Pedee River, continuing improvement, $4,000; Santee River, continuing improvement, $20,000; Waccaman River, N. C. and S. C., continuing improvement, $3,000; Wateree River, maintenance, $2,500; Congaree River, to Gervais St. bridge, Columbia, to Granby, $50,000, provided that $200,000 additional may be used for completing the improvement.

GEORGIA.—Altamaha River, continuing improvement, $6,000; Chattahoochie River, Ga. and Ala., continuing improvement, $50,000, of which $15,000 is to be used for building dredge, and $5,000 for a survey of the river between West Point and Franklin; Flint River, continuing improvement, $5,000; Ocmulgee River, continuing improvement, $20,000, provided that $136,000 additional may be used to complete the improvement; Oconee River, continuing improvement, $10,000; Savannah River, between Augusta and Savannah, continuing improvement, $20,000, provided that $250,000 may be used to complete the improvement; Savannah River, above Augusta, continuing improvement, $1,000; Coosa River, between Rome, Ga., and the East Tenn., Va. & Ga., R. R. bridge in Alabama, deeping channel, etc., $20,000.

FLORIDA.—Apalachicola River, including cut-off and Lower Chipola River, continuing improvement, $3,000; Caloosahatchee River, maintenance, $2,000; Chawtawhatchee River, Fla. and Ala., continuing improvement, $16,000, of which $10,000 will be used between Newton and Geneva; Escambia and Conecuh Rivers, continuing improvements, $5,000; Manatee River, continuing improvement, $10,000, provided that $8,000 be used in dredging, deepening, etc., the channel from this river below Palmetto; St. Johns River, Jacksonville to the ocean, continuing improvement, $200,000, provided that contracts be made for completing the jetties, and that the whole work shall not cost more than $1,359,750; Suwanee River, continuing improvement, $5,000; Volusia Bar, maintenance, $2,000; Ocklawaha River, maintenance, $3,000; Sarasota Bay, continuing improvement, $5,000; Indian River, dredging channel at Negia Cut, near Indian River Inlet, $5,000; Upper Chipola River, $5,000; Anclote River, $5,000; Black Water River, from Milton to its mouth, $5,000; Holmes River, from Vernon to its mouth, unexpended balance for maintenance; St Johns River, Orange Mills Flats, $40,000; dredge for work in Florida, $35,000; boat for operating on navigable streams in Florida, $25,000, and for conducting operations, etc., $11,000.

ALABAMA.—Alabama River, continuing improvement, $50,000; Black Warrior River, from Tuscaloosa to Daniels Creek, continuing improvement, $50,000, provided that $140,500 additional may be used to complete the project; Warrior and Tombigbee Rivers, continuing improvement, $220,000, provided that $440,000 may be used to complete the project, which includes three locks and dams below Tuscaloosa; Tombigbee River, Fulton to Columbus, continuing improvement and maintenance, $5,000; Demopolis, Ala., to Columbus, Miss., continuing improvement, $10,000; from Walkers Bridge to Fulton, continuing improvement and maintenance, $1,000; from the mouth to Demopolis, continuing improvement, $50,000.

MISSISSIPPI.—Big Sunflower River, continuing improvement, $5,000; Piscagoula River and Horn Island Harbor, $50,000, provided that $267,600 may be used to complete the improvement; Pearl River, Edinburg and Carthage, maintenance, $1,000; between Carthage and Jackson, maintenance, $2,500; below Jackson, continuing improvement, $7,000; Tallahatchee River, continuing improvement, $5,000; Yazoo River, continuing improvement, $20,000, a part of which is to be used in removing bar at Yazoo City; Chickasahay River, maintenance, $2,500; Leaf River, maintenance, $2,500; Homochitto River, completing improvement, $16,000; mouth of Pearl River, completing improvement, $18,199.

LOUISIANA.—Amite River and Bayou Manchac, maintenance, $2,500; Boeuf River, continuing improvement, $6,000; Bayou Bartholomew, La. and Ark., maintenance, $5,000; Tensas River and Bayou Macon, La. and Ark., completing improvement, $4,000; Red River, La., Ark. and Ind. Ter., continuing improvement, $150,000, a part to be used to make an examination of the harbor of Alexandria and to report on any improvement that may be required; Tickfaw River, maintenance, $1,000; Bayou Lafourche, maintenance, $7,500; Boque Chitto, continuing improvements, $5,000; Bayou Vermillion, continuing improvements, $2,500; boat suitable for navigable streams, $25,000, and for operations, etc., $11,000; Bayou Teche, continuing improvement, $10,000; Mermenton River and tributaries, completing improvement, $6,115; Johnson's Bayou, completing improvement, 2,500; Bayou Courttableau, removing of the raft at its mouth, $20,000.

TEXAS.—Trinity River, continuing improvement, $7,000; Sabine River, maintenance, $2,000; Brazos River, between Velasco and Richmond, West Galveston Bay Channel, Double Bayou, and the mouths of adjacent streams, $65,000, out of which sum a dredge and snagging outfit are to be purchased; mouths of the Sabine and Neckes Rivers, $10,000, part of which sum is to be used in making a survey of the proposed channel through Sabine Lake.

ARKANSAS.—Arkansas River, Ark. and Ind. Ter., continuing improvement, $100,000, provided that part of this sum be used for repairing dikes and to remedy and guard against any injury to the harbors or river banks in their vicinity that may have been injured or endangered by reason of changes in the channel or encroachments of the river at or near Pine Bluff, Little Rock, Dardanelle, Van Buren and Fort Smith, for the purpose of confining the river to the adopted channel, also provided that at the discretion of the secretary of war $50,000 of this sum may be used for removing snags, sandbars, etc. The president is authorized to appoint a board from the corps of engineers to examine the Arkansas River and to report upon a plan for the permanent improvement of the river, the cost of the survey to be taken from the above sum; St. Francis River, continuing improvement, $8,000; Arkansas River, removing obstructions and operating snag boats, $20,000; Black River, Ark. and Mo., continuing improvements, $8,000; White River, completing improvement, $14,815; Cache River, removing obstructions, $1,000; Upper White River, constructing dam and lock No. 1 near Batesville, $160,000, and lock and dam No. 2, $150,000; Currant River, Ark. and Mo., continuing improvements and maintenance, $5,000; Buffalo Fork of White River, completing improvement, $3,500; Ouachita and Black Rivers, Ark. and La., continuing improvements, $110,000, part of which sum is to be used in making a survey of the river to obtain plans and estimates for buildings, locks and dams necessary to give slackwater navigation.

TENNESSEE.—Clinch River, completing improvements, $8,500; Cumberland River, above Nashville, $100,000, a part of which is to be applied towards completing of unfinished locks and dams 1, 5, 6 and 7; Cumberland River, below Nashville, $100,000, to construct the lock and dam and other improvements at Harpeth Shoals; French Broad and Little Pigeon Rivers, continuing improvements, $5,000; Tennessee River, below River, Ala., $160,000, a part of which will be used for a dredge boat; Tennessee River, between Chattanooga and Riverton, $35,000, part of which shall be used for a survey between Bridgeport and Decatur and a resurvey of the remaining portions of the river, etc., and an examination with a view to building locks and dams, and also possibly to make estimates for constructing a canal across Moccasin Bend below Chattanooga, provided that surveys are made of the Clinch and French Broad Rivers; Tennessee River, Colbert Shoals and Bee Tree Shoals, continuing improvements, $100,000; Tennessee River, above Chattanooga, continuing improvement, $30,000; Obion River, maintenance, $2,500; Forked Deer River, maintenance, $2,000; Elk River, continuing improvements, $4,000.

KENTUCKY.—Big Sandy River, Ky. and W. Va., continuing improvement, $52,500, provided that $420,000 additional be used for completing the improvements which will include two locks and dams; of this sum $20,000 is to be used for a detailed survey of the Big Sandy River and Leviza and Tug Forks of the same in Kentucky and West Virginia; Green River, above the mouth of Big Barren River, completing improvement, $85,673; survey of Lickink River from its mouth to Falmouth, Ky., and for estimates of cost of a lock and dam near Three-Mile Riffle, $10,000; Ohio River, from its head to its mouth, continuing improvement, $375,000, of which amount $35,000 is to be spent upon a survey of the Ohio River from Marietta, O., to the mouth of the Big Miami River, with a view to the improvement of said river between these points by movable dams and otherwise; it is also provided that out of the $375,000 the sum of $35,000 is to be appropriated for general snagging purposes; $20,000 for dredging the harbor at Madison, Ind., to 6 ft. depth; $10,000 for dredging the harbor at Golconda, Ill.; $10,000 for dredging the harbor at Brooklyn, Ill.; $25,000 for dredging and dikes to deepen the river channel at Mound City, Ill.; $15,000 to continue the repair of the embankment at Lawrenceburg, Ind.; $25,000 for continuing the embankment at Shawneetown, Ill.; $1,000 for a survey of the river bank and adjoining ground near New Liberty, Ill., so far as necessary as to determine the cost of work necessary to prevent the Ohio River from cutting its banks at this locality; $1,000 for a survey of the river bank at or near Paducah, Ky., to estimate the cost of protecting the city front against injury by high water, and provided that out of the expended balance the sum of $20,000 shall be used for dredging along the city front at Evansville, Ind.; Ohio River, continuing improvement at dam No. 13, $50,000, to be used for the local survey, site and commencing construction of the dam, provided that $800,000 additional be used for completing the improvement; Ohio River, continuing improvement at dam No. 18, $50,000, to be used for the survey, purchase of site and for commencing work on the dam, provided that $800,000 additional may be used for completing.

MICHIGAN.—Belle River, completing improvement, $10,000; Hay Lake Channel, St. Marys River, continuing improvement, $100,000, provided that $394,115 be used for carrying on the work, and provided further that a survey of the connecting waters between Lakes Superior and Huron, including Hay Lake Channel, be made to secure plans and estimates for a channel 21 ft. deep; Saginaw River, continuing improvement, $40,000; Pine River, completing improvement, $5,560; Black River, at its mouth, continuing improvement, $4,000; Detroit River, removing shoals from Detroit to Lake Erie, continuing improvement, $100,000, provided that $661,500 be used for completing the improvement, and providing further that a survey of the Detroit River be made for plans and estimates for a channel 21 ft. deep; Black River, at Port Huron, continuing improvement, $4,000; Kalamazoo River, continuing improvement, $10,000; Grand River, continuing improvement, $75,000; Sebewaing River, completing improvement, $32,000; Rouge River, unexpended amount for a turning basin at Rouge River, to be used for improving the channel.

WISCONSIN.—Chippewa River, including yellow banks, continuing improvement, $10,000; Fox River, continuing improvement, $27,500, of which $3,000 is for use on the Wolf River; $2,000 for improving the harbor on the east shore of Lake Winnebago, and $2,500 for a retaining wall on the Canal at Kaukauna; St. Croix River, Wis. and Minn., continuing improvement, $9,000; Menominee River, Mich. and Wis., dredging, $18,920.

MINNESOTA.—Red River, at the north, and tributaries, continuing improvement, $25,000, of which $10,000 is to be used for improving Red Lake River; Minnesota River, continuing improvement, removing bar, $1,000; removing sand bar at mouth of Warroad River, $3,000; survey of Red Lake and Red Lake River, with a view to constructing dam with locks at outlet of the lake, $5,000; survey of Otter Tail Lake and Otter Tail River, with a view to constructing a dam at the outlet of the lake, $3,000; for a further survey of Big Stone Lake and Lake Traverse, Minn. and S. Dak., with a view to constructing reservoirs for improving navigation on the Minnesota River, $5,000.

ILLINOIS.—Wabash River, Ind. and Ill., above Vincennes, Ind., completing improvement, $4,000; below Vincennes, continuing improvement, $15,000; Calumet River, continuing improvement, $60,000; Illinois River, continuing improvement, $100,000; Illinois River and Des Plaines River, survey for improving the Upper Illinois River and the Lower Des Plaines River with a view to extending navigation from the Illinois River to Lake Michigan at or near Chicago, $30,000.

MISSISSIPPI RIVER.—Reservoirs at the headwaters of the Mississippi River, continuing improvement, $210,000, provided that so much of this amount as is necessary shall be used in making surveys of the flowage lines of Winnibigoshish, Leech Lake, Pokegama Falls and Pine River reservoirs; and a survey and investigation to determine the causes of and the means of preventing the excessive floods on the river between government dam at Sandy Lake and Brainerd, Minn.; for work in accordance with the plans and specifications of the Mississippi River Commission; Harbor at New Orleans, La., continuing improvement, $110,000; Harbor of Natchez and Vidalia, Miss. and La., $5,000; Harbor of Memphis, Tenn., the commission to examine the harbor and report what improvement should be made to remove the bar in front of the city; rectification of Red and Atchafalaya Rivers, La., continuing improvement, $25,000; Mississippi River, between the C., St. P., M. & O. R. R. bridge at St. Paul and the Washington Ave. bridge at Minneapolis, continuing improvement, $150,000, provided that $815,579 additional be used for completing the improvement.

MISSOURI RIVER.—From the mouth to Sioux City, Ia., $100,000, provided that the same be used for special work of continuing improvement; mouth of Kaw River, Mo., $5,000; right bank above mouth of Little Blue River, Mo., $5,000; above Glasgow, Mo., $10,000; near Huntsdale, Mo., $10,000; above Kansas City, Mo., $20,000, and to operating snag boats between Sioux City and the mouth, $35,000; repairs to south bank of the river at Judith, Mont., $5,000; repair levee at Fort Benton, $5,000.

MISSOURI.—Gasconade River, continuing improvement, $15,000; Osage River, lock and dam, $25,000, provided that $146,000 additional may be used for completing the improvement; Missouri River, removing obstructions above Sioux City, $50,000; continuing improvements to harbor at Sioux City, $30,000; above Sioux City to Bismarck, $170,000; Missouri River on the Nebraska side, between Sioux City, Ia., and South Sioux City, Neb., $25,000.

CALIFORNIA.—Sacramento River, from Sacramento to the mouth, continuing improvement, $30,000, provided that $250,000 additional be appropriated for completing the improvement; San Joaquin River, continuing improvement, $20,000, to be used also in improving Stockton and Mormon Channels; Petaluma Creek, continuing improvement, $4,000.

OREGON.—Upper Columbia River and Snake River, Ore. and Wash., continuing improvements, $7,500; Coos River, completing improvement, $3,000; canal at Cascades, Columbia River, continuing improvements, $75,000; Long Tom River, $3,000 and a sum taken from the unexpended amount for the improvement of the Willamette River, above Portland; Lower Willamette River, below Portland, and the Columbia River, below the Willamette River, Ore. and Wash., continuing improvement, $150,000; Coquille River, below Coquille River, continuing improvement, $40,000; Clatskanie River, completing improvement, $13,000; gaging waters of the Columbia River, $1,000; Upper Coquille River, between Coquille City and Myrtle Point, Ore., continuing improvement, $9,000; Columbia River, below Tongue Point by way of the south channel, in front of Astoria, completing, $71,000.

IDAHO.—Clearwater River, completing improvement, $10,000.

WASHINGTON.—Cowlitz River, continuing improvement, $3,000; Lewis River, from its mouth to Lacente, $10,000; Puget Sound and its tributary waters, continuing improvement, $20,000; Chehalis River, snagging, $3,000; Pend Oreille River, from Albany Falls to Metalline, Wash., $10,000; Swinomish Slough, continuing improvement, $20,000; Willapa River and harbor, continuing improvement, $5,000; Okanagon River, $15,000; preliminary surveys, examinations, contingencies, etc., not already provided for, $200,000.

CONTRACT PRICES

UNDERGROUND CROSSING.—Williamsport, Pa.—We are informed that the following bids were received March 8, 1899, for constructing underground crossings at East 3d and Pine Sts., as advertised in Engineering News:

Quantities.		Coryell Constn Co., Williamsport, Pa.	Whalen & Higgins, Waverly, N. Y.
Excavation	8,131 cu. yds.	$0.25	$0.25
Concrete masonry	309 " "	4.00	4.00
Handrailing	645 lin. ft.	1.00	.80
Cement sidewalk	4,000 sq. ft.	.15	.15
Flagstone relaid	3,000 " "	.06	.05
Rub. mas. undrping	20 cu. yds.	6.00	5.00
15-in. storm sewer	530 lin. ft.	1.45	1.83
12-in. " "	40 " "	.60	.46
6-in. underdrain	540 " "	.25	.12
Manhole		25.00	15.00
Catchbasins	2 each	30.00	27.00
6-in. curb, in conc.	66 lin. ft.	.80	.90
Reset, in concte.	300 " "	.40	.14
Circulr in conc	20 " "	1.30	1.15
Headers reset	82 each	.15	.05
Brick pavemt relaid	670 sq. yds.	1.35	1.50
New brk pavement	1,150 " "	1.50	1.70
Artificial stne steps	15 lin. ft.	4.00	1.00
Total		*$8,727	$8,860
Pine St. Undergrade Foot Crossings.			
No. 1 enamel brick		$4,200	*$3,634
No. 2 enamel brick		4,000	3,534

*Awarded contracts.

IRRIGATION PIPE LINE.—Monrovia, Cal.—W. A. Walker, Cy. Clk., informs us that the following bids were received March 18, 1899, for furnishing the materials and for laying an irrigation pipe line, (1) being for 22,921 ft. of trench with an average depth of 50 ft. by 30 ft. wide; 4,000 ft. of gravely clay, the balance sandy and gravely, bid includes excavating and backfilling; (2) for 2,494 ft. of 14-in. cement pipe, including excavating, laying and backfilling; (3) for 370 ft. of 10-in. No. 16 double riveted steel pipe furnished and laid including excavating and backfilling of trench; (4) for 4,080 ft. of 10-in., including above; (5) for 2,000 ft. of 12-in., including above; (6) for 477 ft. of 14-in., including above; (7) for 13,500 ft. of 14-in. No. 14 steel pipe, including above; (8) for a cement weir box 4×5 ft. and 2×3 ft. 9 ins.; (9) for a 14×6-ft. tee; (10) for a 14×10×10-ft. tee; (11) for a 10-in. gate; (12) for four 6-in. gates; (13) for a 10×6-ft. tee; (14) for four 14×6-ft. crosses: J. A. Baxter, Monrovia, (1) 4½ cts. a lin. ft., (2) 36½ cts. a lin ft., (8) $50; totals, $960 for complete cement line, and $1,051 for excavating and backfilling trench for entire line; B. R. Davison, Duarte, Cal., (2) 36 cts., (8) $47.50; $945; C. D. Vincent, 5 Mills Block, San Francisco, (1) 9⅛ cts. for steel pipe, and 12⅛ cts. for cement pipe; Patton & Barber, Monrovia, (1) 8 cts. for 10-in. pipe, 8½ cts. for 12-in. pipe, 9 cts. for 14-in. pipe; J. D. Hooker Co., Los Angeles, Cal., (3) 47½ cts. a ft., (4) 52 cts., (5) 56½ cts., (6) 63½ cts., (7) 73 cts., (9) $6.50, (10) $8.00, (11) $35.00; (12) $50 each, (13) $4.75, (14) $34 each, total, $13,724; J. M. Gardiner, Los Angeles, Cal., lump sum, $16,908 for complete line including cement line; Lacy Mfg. Co., Los Angeles, lump sum, $13,132 for steel pipe line complete ready to turn water into and subject to engineers' test. Contracts were let to the Lacy Mfg. Co. for steel line complete, and to B. R. Davison for cement line and weir box complete.

SPRINKLING WAGONS.—Salt Lake City, Utah.—Robt. Patrick, Chn. Com. on Sprinkling, informs us that the following bids were received March 6, 1899, for furnishing, f. o. b. cars Salt Lake City, 15 wooden tank sprinkling wagons of 750 gallons each, and 10 of 600 gallons:

Bidder.	Gallons 600 each.	Gallons 750 each.
F. C. Austin Mfg. Co., Harvey, Ill.	$335	$370
Miller-Knoblock Co., South Bend, Ind.	316	333
Winkler Bros., South Bend, Ind.	349	360
*Studebaker Bros. Mfg. Co., South Bend, Ind.	325	345
Oblad & Knight, Salt Lake City, Utah	385	410

*Awarded contract March 23; extras made the total up to $8,658.

PIPE SEWERS, ETC.—Waterbury, Conn.—We are informed that Thos. F. Mahar, New Haven, Conn., has been awarded the contract for pipe sewers as follows: 15-in. pipe sewer, $1.00; 12-in. pipe sewer, $1.00; 8-in. pipe sewer, 63 cts.; manholes, $40 each; catchbasins, $70 each; total, $3,129.

PIPE WELLS.—Berlin, Ont.—W. M. Davis, Town Engr., and Supt. Water-Wks., informs us that the following bids were received March 1, 1899, for sinking pipe wells: Brickn & McCollum also bid on 4-in. well at $1.75 a ft.; at least 300 ft. will be driven:

Bidder.	Pipe 8-in.	Pipe 6-in.
P. A. Petersen, Kincardine, Ont.	$3.25	$2.00
Brickn & McCollum, Hawksville, Ont.	3.00	2.25
Frazee & Harvey, Petrolea, Ont	2.64	2.18

GRAVEL AND FLAGGING.—Boston, Mass.—We are informed that the following bids were received March 21, 1899, by B. W. Wells, Supt. Sts., for beach gravel and North River flagging. Gravel—M. J. Mahoney, 78 cts. a ton; B. Farwell, 75½ cts.; W. F. Cargill, 73 cts. (accepted); J. W. Hensby, 76½ cts. Flagging—A. Ford & Son, on wharves, 29½ cts., on streets, 33 cts. a sq. ft.; Baldwin & Emerson, 32½ and 37¾ cts.; J. J. Cudihy, 31 and 33½ cts.; Maker Bros., 30¼ and 33½ cts.

BRICK PAVING.—Champaign, Ill.—We are informed that the following bids were received March 9 for brick paving in Washington and South 2d Sts.; W. H. Tarrant, Cy. Engr.:

Watertown Arsenal, Mass., to St. Helena Island, Port Royal, S. C., weight 190,000 lbs.: Merritt & Chapman Wrecking Co., $2,844; C. W. Crane, 12-in. rifles, $1,424; Pennsylvania R. R. Co., 44 cts. a 100 lbs., 6-in. gun 22 cts. a 100 lbs., 12-in. rifles 15 cts. a 100 lbs.; the Seaboard Air Line, 44 cts.; the Atlantic Coast Dispatch Co., 44 cts.; the Great Southern Dispatch, 44 cts.

CURB STONES, ETC.—Manchester, N. H.—Local papers state that the following bids were received March 17, 1899, for furnishing lumber, curb stones, etc.: Lumber—A. C. Wallace, 16-ft. hemlock plank $10.90, spruce plank and bracing $13.25 (accepted); The Head & Dowst Co., $11.25 and $13.75, respectively. Stone, Etc.—Warren Harvey, curb stones 28 cts a ft., cesspools $1.80 each, circles, $1.90 (accepted); C. A. Bailey, 35 cts., $2, and $2.80, respectively; F. S. Bodwell, 29 cts., $1.85 and $2, respectively; flagstones 80 cts. a ft.

Globe & Gas Light Co., 125 20-c. p. lamps, one year $27.90; two years, $26.84; three years, $25.94; 200 lamps, one year, $26.80; two years, $26; three years, $24.90. Carbon Light & Power Co., Jersey City, N. J., 125 20-c. p. lamps, one year, $19.48; two years, $19.10; three years $18.45; 200 lamps, or more, one year, $18.45; two years $18.30; three years, $18.10. Binghamton Gas Works, 75 lamps, one year, 7½ cts. a night; 75 to 150 lamps, three years, 7¼ cts. a night; 150 or more lamps, for three years, 7 cts. M. F. Long, Binghamton, 200 or more naphtha lamps, 20-c. p., one year, 6.01 cts. a night; two years, 5.87 cts.; three years, 5.69 cts.

RIP-RAP ROCK.—Rock Island, Ill.—We are informed that the following bids were received by Capt. C. McD. Townsend, U. S. Engr., March 15, 1899, for furnishing about 60,000 cu. yds. of rip-rap rock at various localities between St. Paul and the mouth of the Missouri River; the amount for the purchase is available from the appropriation of $826,667 made by the Sundry Civil Service Act approved July 1, 1898, for improving the Mississippi River from the mouth of the Ohio River to St. Paul, Minn.; A being price per cu. yd. for 10,000 cu. yds. between Nininger and Redwing; B for 12,000 yds. between Minona and Lacrosse; C for 12,000 yds. between Louisiana and Clarksville; D for 16,000 yds. between Clarksville and Hamburg; E for 10,000 cu. yds. between Hamburg and Hastings; in some cases bids are given for a less amount of rip-rap than is mentioned above, in which case it is so noticed: Marshall Rust, Harriston, Mo., E, 58 cts. a cu. yd.; Grafton Quarry Co., St. Louis, E, 50 cts.; Henry Doser and Thomas Welsh, Potosi, Wis., E, 6,000 yds., 50 cts.; Edgar R. Leach, Dakota, Minn., B, 6,000 yds., 54½ cts.; B. H. Veto, Clarksville, Mo., C, 10,000 yds., 46½ cts., recommended for acceptance; Henry Denno, Dakola, Minn., B, 5,000 yds., 52 cts., recommended for acceptance; Ephraim Johnson, Hastings, Minn., A, 5,000 yds., 39 cts., or 10,000 yds., 41 cts.; Edward O. Peterson, Hastings, Minn., A, 5,000 yds., 33¾ cts. or 43¾ cts.; Sid J. Fruax, Hastings, A, 54 cts.; Jacob Richtman, A, 60 cts.; B, 60 cts., C, 60 cts., D, 60 cts., E, 60 cts., bid not dated and guaranty incomplete; John Olson and John E. Blomstrand, Hastings, A, 49⅞ cts.; Wm. P. Fruax, Hastings, A, 48 and 54 cts.; J. Carlson, Hastings, A, 5,000 yds., 38½ cts. and 44¾ cts.; Mathew E. Hueston, Hannibal, Mo., D, 10,000 yds., 55 cts., recommended for acceptance, E, 65 cts.; E. L. Foreman, Dresbach, Minn., B, 6,000 yds., 62 cts.; John Pellowski, Winona, Minn., B, 54½ cts.; Sid J. Fruax, Hastings, A, 38 cts.; C. C. Pratt and G. N. Cash, Louisiana, Mo., C, 60 cts.; D, 60 cts. John Harry, Alma, Mo., B, 7,000 yds., 62 cts.; Jas. Short, St. Charles, Mo., E, 49 cts., recommended for acceptance.

Bids Received at Champaign, Ill., for Brick Paving in Washington St.

Quantities for Washington St.		*Norton & Gilmore, Terre Haute, Ind.	Foster & Martin, Attica, Ind.	G. Maffioli, Rockford, Ill.	J. W. Stipes, Champaign, Ill.	J. F. Bretz, & Son, Springfield, Ill.	J. H. Palmer, Danville, Ill.	Yeager & Dickenson, Danville, Ill.
Excavation	6,050 cu. yds.	$0.16	$0.18	$0.25	$0.22	$0.22	$0.20	$0.18
Stone curbing	2,300 lin. ft.	.30	.40	.45	.38	.40	.45	.32
Brick masonry	40 cu. yds.	10.00	6.00	10.00	8.40	5.50	15.00	5.40
Poston Block (On 6-in. gravel conc.)	5,370 sq. yds.	1.21	1.23	*1.20	1.27	1.28	1.40	1.23
Clinton (On 6-in. gravel conc.)		1.16	1.18	1.20	1.22	1.25	1.35	1.21
Galesburg (On 6-in. gravel conc.)		1.28	1.30	1.20	1.33	1.33	...	1.31
Poston Block (On 6-in. brkn stn conc.)		1.30	1.39	1.35	1.38	1.43	1.45	1.36
Clinton (On 6-in. brkn stn conc.)		1.26	1.34	1.35	1.33	1.40	1.40	1.34
Galesburg (On 6-in. brkn stn conc.)		1.38	1.47	1.35	1.44	1.48	...	1.44
Catchbasins, 3 ft. 5 ins. diam.	12, per ft.	3.00	3.50	...	3.30	5.00	4.00	3.75
Catchbasins, 4 ft. diameter	12 " "	3.50	...	...	3.65	4.50	5.00	4.00
Pipe drain:								
15-in. vitrified, av. cut 3 ft.	400 lin. ft.	.30	.43	...	.25	.40	.35	.35
Each additional foot		.02	.05	...	.05	.06	.20	.025
12-in. vitrified, av. cut 3 ft.	1,100 lin. ft.	.21	.36	...	.20	.36	.30	.31
Each additional foot		.02	.05	...	.05	.06	.20	.025
10-in. vitrified, av. cut 3 ft.	300 lin. ft.	.18	.32	...	.17	.32	.30	.28
Each additional foot		.02	.05	...	.05	.06	.20	.025
8-in. vitrified, av. cut 3 ft.	200 lin. ft.	.13	.28	...	.15	.20	.30	.25
Each additional foot		.02	.05	...	.05	.06	.20	.025

*Awarded contracts.

The bids on the South Second St. work were the same with two exceptions, viz.: Norton & Gilmore, Poston block on 6-in. broken stone concrete, $1.31, and J. W. Stipes, 10-in. pipe drain, 15 cts. a ft. The quantities are as follows: Excavation, 6,800 cu. yds.; stone curbing, 2,300 lin. ft.; brick masonry, 40 cu. yds.; brick on 6-in. gravel concrete, 5,250 yds., the same on 6-in. broken stone concrete,; catchbasins, 3 ft. 5 ins., 10; 12-in. drain, 50 ft.; 10-in. drain, 50 ft.; 8-in. drain, 50 ft.

CEDAR BLOCK PAVING.—Fargo, N.Dak.—S.F. Crabbe, Cy.Engr., writes us that the following bids were received March 29, 1899, for 31,000 sq. yds. of cedar block paving: P. McDonnell, $1.08 a yd.; wooden curb, 33 cts. a ft.; Jas. Kennedy, $1.06; wooden curb, 32 cts. (accepted).

COMPLETING SEWERAGE SYSTEM.—Clinton, Mass.—We are informed that the following bids were received March 21 for completing the Clinton sewerage system being built by the Metropolitan Water Board, as advertised in Engineering News; contract let to Chas. N. Taylor:

SIDEWALKS.—Des Moines, Ia.—The following bids were received about March 20 for sidewalk work during the year: Cement walks and driveways—J. F. Hanrahan, 12 cts. and 22 cts. a sq. ft.; J. D. McCauley, 13 and 15 cts.; James Maine, 12½ and 18 cts.; Joseph Kehoe, 12 and 36 cts., respectively. Brick walks and driveways—J. F. Hanrahan, 6¼ and 18 cts.; F. W. Hunt, 6¾ and 18 cts.; McCauley, 6¾ and 19 cts.; J. Maine, 8 and 18 cts.; J. Kehoe, 9.9 and 21 cts., respectively. Last year, it is said, that the cement work went at 11 cts a sq. ft. and brick at 6½ cts.

RIP-RAP.—Cairo, Ill.—George Burnett & Co., Ullin, Ill., organized in February, have been awarded the contract for furnishing the city with rip-rap for building along the Ohio River levee at 70 cts. a cu. yd., f. o. b. cars, Ullin.

BRUSH.—Rock Island, Ill.—We are informed that the following bids were received March 15, 1899, by Capt. C. McD. Townsend, U. S. Engr., for furnishing about 107,000 cu. yds. of brush at various localities between St. Paul and the mouth of the Missouri River, as advertised in Engineering News; A being for delivering 15,000 cu. yds. between St. Paul and Lake Pepin; B for 28,000 yds. between Winona and Lacrosse; C for 36,000 yds. between Hickory Chute and Hamburg; D for 28,000 yds. between Hamburg and Grafton; some bids are for furnishing less than the stated number of cubic yards, and in such cases the amount bid on is given: Marshall Rust, Harriston, Mo., C, 29 cts., D, 28 cts., latter bid recommended for acceptance; B. N. Veto, Clarksville, Mo., C, 12,000 yrs., 19¼ cts.,recommended for acceptance; J. Betts and S. E. Bolin, Rockport, Ill., C, 5,000 yds.,20 cts., 10,000 yds., 21 cts., both bids recommended for acceptance; Ephraim Johnson, Hastings, A, 5,000 yds., 20 cts.; E. O. Peterson, Hastings, A, 19½ cts.; Peter Nelsson, Hastings, A, 22 cts.; Jacob Richtman, Elsberry, Mo., A to D, inclusive, 30 cts.; bid not dated and guaranty incomplete; Olson & Blomstrand, Hastings, A, 19⅞ cts.; Aug. C. Brant, Buffalo City, Wis., A and B, 14 cts., recommended for acceptance; G. A. Nichols, Hamilton, Mo., C, 5,000 yds., 22 cts.; Norbert Noll, Fountain City, Wis., B, 16 cts.; Herbert Ames, St. Paul Park, Minn., A, 5,000 yds., 20 cts.; Albert H. Frazer, St. Paul Park, 5,000 yds., A, 20¾ cts.; Mason & Winters, Fort Madison, Ia., C, 21¾ cts., recommended for acceptance; Albert Kirchner, Fountain City, Wis., B, 25 cts.; J. W. Nason, C, 8,000 yds., 22 cts.; Henry Jahn, Hastings, A, 23¾ cts.; S. J. Fruax, Hastings, A, 29 cts.; Chas. Ott, Genoa, Wis., B, 15½ cts.

Bids Received at Clinton, Mass., March 21, 1899, for Completing Sewerage System now being Built by the Metropolitan Water Board.

Quantities.		Chas. N. Taylor, Natick, Mass.	Baker & Judson, Gloversville, N. Y.	E. R. Patterson Con. Co, New York, N. Y.	M. Murphy & Co., Clinton, Mass.	Coleman Bros., Charlestown, Mass.	C. G. Craib, Winthrop, Mass.	P. F. Brennan, New York, N. Y.	Cheney and Trumbull Chelsea and Reading, Mass.	Jos. D. Gennaro, Boston, Mass.	C.E. Trumbull & Co., Boston, Mass.	Newell & Snowling C. Co., Uxbridge, Mass.	Moulton & O'Mahoney, Boston, Mass.	Geo. M. Bacon, W. Medford, Mass.	Bruno & Salomone, East Boston, Mass.	Long & Little, Leominster, Mass.
Earth excavation: Intercepting sewer	3,300 cu. yds.	$0.40	$0.40	$0.45	$0.35	$0.45	$0.60	$0.50	$0.65	$0.70	$0.60	$0.57	$0.60	$0.74	$0.75	$0.75
Earth not finally disposed of.	700 " "	.20	.25	.25	.20	.25	.30	.25	.25	.30	.30	.23	.25	.34	.30	.30
Reservoir and pumping station	500 " "	.40	.50	.70	1.00	.75	1.00	.80	1.25	1.50	1.00	.57	.75	.69	3.25	3.00
Earth not finally disposed of.	4,000 " "	.15	.40	.25	.20	.25	.20	.25	.20	.25	.25	.23	.25	.36	.20	.25
Borrowed earth	1,500 " "	.25	.25	.24	.30	.50	.30	.25	.30	.30	.25	.37	.35	.36	.30	.30
Rock excavation	200 " "	2.00	3.00	1.90	3.00	4.00	4.00	2.00	3.00	3.00	4.00	5.00	4.00	2.50	3.00	5.00
Masonry: Brick, Rosndle cem. mort.	70 " "	12.00	12.00	11.20	12.00	13.00	12.00	11.00	12.00	14.00	11.00	13.00	14.00	10.90	14.00	15.00
Laid in Portland cem. mortar	55 " "	13.00	14.00	11.95	13.00	15.00	15.00	12.50	14.00	15.00	18.00	15.00	18.00	13.72	15.00	16.00
Rosendale cement concrete	170 " "	4.00	4.00	4.10	5.00	6.00	5.00	6.00	5.50	5.00	5.00	5.00	6.00	4.96	6.00	5.00
Portland cement concrete	910 " "	6.75	6.00	7.20	7.00	7.00	7.20	7.75	8.00	7.00	8.00	8.50	9.00	8.77	8.00	8.00
Stone: Laid in mortar	130 " "	6.50	6.00	6.00	7.50	6.00	10.00	6.00	6.50	7.00	10.00	9.00	10.00	7.50	9.00	8.00
Stone paving	20 " "	2.00	3.00	2.00	2.00	5.00	6.00	2.00	2.00	2.00	3.00	2.50	3.00	4.00	4.00	3.00
24-in. vit. pipe, furnished and laid	500 lin. ft.	1.00	.90	.85	1.00	1.50	1.00	1.10	1.00	1.00	.90	.90	.88	1.39	1.20	1.25
20-in. " " " "	2,950 " "	.70	.65	.65	.90	.90	.75	1.00	.68	.70	.65	.77	.65	.87	.90	1.00
6-in. " " " "	2,270 " "	.10	.15	.16	.30	.15	.25	.30	.25	.20	.25	.23	.25	.13	.20	.30
18-in. cast-iron pipe, laying	400 " "	.50	.60	.60	.70	.50	.50	.70	.60	1.00	.35	.65	.80	.70	.65	1.00
16-in. " " "	105 " "	.50	.60	.50	.10	.50	.50	.60	.60	1.00	.30	.65	.75	.60	.65	1.00
Spruce lumber placed in foundation.	12 M. ft.	25.00	30.00	24.00	30.00	25.00	30.00	30.00	30.00	40.00	30.00	29.00	30.00	26.00	30.00	30.00
Total		$15,642	$16,281	$16,546	$17,922	$18,888	$19,120	$19,234	$19,242	$19,299	$19,582	$20,262	$21,079	$21,113	$21,912	$22,916

DREDGING.—Buffalo, N. Y.—R. G. Parsons, Secy. Bd. Pub. Wks., informs us that the following bids were received March 21, 1899, for dredging; estimated quantities are 60,000 cu. yds. from Blackwell Canal, 15,000 yds. from the harbor, 5,000 yds. from Peck's Slip, and 100,000 yds. from Buffalo River: Buffalo Harbor—Buffalo Dredging Co., 17¾ cts. a cu. yd.; Hingston & Woods, 17¾ cts.; L. P. & J. A. Smith Co., 20 cts. Buffalo River—Buffalo Dredging Co., 17¾ cts.; L. P. & J. A. Smith Co., 18½ cts.; Hingston & Woods, 18 cts. Blackwell Canal—Buffalo Dredging Co., 17¾ cts.; L. P. & J. A. Smith Co., 18½ cts.; Hingston & Woods, 18¼ cts. Peck's Slip—Buffalo Dredging Co., 17¾ cts.; L. P. & J. A. Smith Co., 20 cts.; Hingston & Woods, 19 cts.

PAVING STONES, ETC.—Fall River, Mass.—Local papers state that the following are the bids received by the council on March 20, 1899, for furnishing paving stones, curb stones, etc., about 125,000 paving blocks will be required: Dudevoir & Savoie, Fall River, Mass., 50,000 blocks, delivered on street, $55 a 1,000 blocks; S. Benoit, Fall River, Mass., 50,000 blocks, delivered on street, $58; J. R. Wilmot, Fall River, Mass., delivered on street, $62; F. W. Lawson, Fall River, Mass., 50,000 blocks, $49; W. Shea, West Quincy, Mass., $57.85; Rockport Granite Co., Rockport, Mass., $57.90; J. S. Black, Vinal Haven, Me., $50; Joseph Leopold, 18 Broadway, N. Y., $48; New England Granite Co., Concord, N. H., 25,000 blocks, $48.49; Henry C. Pearce, Broadway New York, $44.85; Frank Bradbury, West Franklin, Me., $48; M. T. Hanscom, New York, $46.89; M. T. Jameson, Clark Island, Me., $52; W. G. Archie, Garrison, N. Y., $47; John P. Gordon, Franklin, Me., 75,000 blocks, $48.75; John P. Gordon, Franklin, 50,000 blocks, $47.75; W. B. Blaisdell, Franklin, $48; Pigeon Hill Granite Co., Rockport, Mass., $56.25; Hooper, Havey & Co., No. Sullivan, Me., $50; I. Picard, Fall River,delivered on street,$49.75 (accepted); Robertson & Havey, North Sullivan, Me., $52.65; M. D. Chatto, South Brooksville, Me., $44.74; Crabtree & Havey, Sullivan, Me., $50; R. H. Condon, South Brooksville, Me., $43.23; Henry Gardiner, Millstone, Conn., $49.50. Curb Stones.—The following are the bids for furnishing curb stones, of 12,000 ft. of which will be required: Israel Picard, 67½ cts. a ft.; Thomas Hindle, 49¾ cts. (accepted); Flavien Cote, 52¾ cts.; J. B. Wilmot, 69 cts.; Soucy, Gaucher & Ross, 47¾ cts.; Sam. Benoit, 68 cts.; W. Beattie, 67¾ cts.

REMOVING GUNS, ETC.—New York, N. Y.—It is stated that the following bids were received by Col. A. S. Kimball, Q. M. Dept., Army Bldg., Whitehall St., for removing two 12-in. rifles, weighing 114,700 lbs. each, from Watervliet Arsenal, N. Y., to Gull Island, Long Island Sound; one 6-in. gun, weight 15,000 lbs., to Sandy Hook proving grounds, and one 10-in. disappearing carriage, from

RUBBER HOSE.—New York, N. Y.—The quartermaster's department, U. S. A., Army Bldg., received the following bids last week for furnishing 10,000 ft. of ¾-in. rubber hose, coupled in 50-ft. lengths: John W. Buckley, 8½ cts. a ft.; Gutta Percha & Rubber Mfg. Co., 13 cts.; Revere Rubber Co., 11½ cts.; Boston Woven Hose Co., 7½ cts. per sample and not per specifications; New York Belting & Packing Co., 9 cts. and 7½ cts.; Empire Rubber Mfg. Co., 15½ cts.; New Jersey Car Spring & Rubber Co., 9½ cts.

WATER PIPE, VALVES AND HYDRANTS.—Hastings, Neb.—We are informed that the following bids were received about March 16 for furnishing water pipe, valves and hydrants; E. A. Francis, Cy. Clk.; Jacob Fisher, Mayor:

Bids Received at Hastings, Neb., March 16, 1899, for Water Pipe, Valves and Hydrants.

Bidder.		Pipe. 4-in.	Pipe. 6-in.	Valves. 4-in.	Valves. 6-in.	Valves. 8-in.	Valves. 10-in.	Valves. 12-in.	Valves. 16-in.	Valves. 16-in.†	Hydrants.
Crane-Churchill Co.		$25.85	$25.85	$5.30	$8.00	$14.55	$23.80	$33.25	$97.50	$116.30	$23.25*
Michigan Brass & Iron Works		.....	.....	6.60	10.00	16.00	23.40	.....	.....	.....	23.00
M. Harris Collins		.....	.....	7.25	12.40	18.00	26.10	.....	.....	.....	24.00
Taylor & Rutherford		25.15	24.15	6.25	8.75	13.75	18.25	.....	.....	.....	.....
J. A. Rose		27.25	26.50	5.35	8.00	14.15	23.10	32.50	.....	83.00	.....
Bourbon Copper & Brass Works		.....	.....	5.75	9.67	12.48	18.50	.....	.....	.....	23.20
Addyston Pipe & Steel Co.		28.50	27.50	.....	.....	.....	.....	.....	.....	.....	.....
Rumsey & Seikemer Co.		.....	.....	5.00	7.50	14.50	22.50	.....	.....	.....	.....
James B. Clow & Sons	Taper seat	27.50	26.50	7.75	12.75	18.75	24.75	.....	.....	.....	.....
	Parallel seat	27.50	26.50	6.75	10.75	16.50	22.00	.....	.....	.....	.....
Chapman Valve Co.		.....	.....	7.15	10.37	17.11	24.96	34.44	56.84	69.41	.....

*Hydrants: Eclipse, $23.25; Perfection, $24.25. †16-in. geared valve.

Abendroth & Root Mfg. Co. put in lump bid on steel pipe at $945. The Crane-Churchill Co. has the contract for valves and hydrants: Taylor & Rutherford that for pipe.

SHELL ROAD.—New Orleans, La.—Local papers state that the following bids were received by the park commissioners March 19, 1899, for constructing a shell road: Thos. A. Egan, 41 cts. a sq. yd.; S. A. Calongne, 52 cts.; Jos. A. Craven & Co., 39¾ cts.; E. F. Keslinger, 59 cts.; D. & J. Tranchina, 50 cts.; E. A. Grasser, 35 cts.

STREET LIGHTING.—Binghamton, N. Y.—The council received the following bids March 21, 1899, for street lighting: Welsbach Street Lighting Co., New York, 75 60-c. p. lights, one year, $38 a lamp; two years, $37; three years, $35; 100 lamps, one year, $37; two years, $36; three years, $33; 150 lamps, one year, $35; two years, $34; three years, $32; 200 lamps, one year, $33; two years, $32; three years, $31. New York & New Jersey

INVERT BRICKS.—Washington, D. C.—The following bids have been received by the district commissioners for furnishing 50,000 vitrified invert brick: J. H. Guise, Williamsport, Pa., $25 a 1,000; Savage Fire Brick Co., Keystone Junction, Pa., $29.50 a 1,000.

REMOVING DIRT.—Albany, N. Y.—The following contracts have been let for removing dirt from the various precincts of the city: M. F. Dollard, 1st precinct, 27 cts. a yd.; third precinct, 26½ cts.; fourth precinct, 27 cts.; John Reagan, fifth precinct, 23 cts. a yd.; John C. Wasserbach, second precinct, 28 cts.

BRICK PAVING.—Albany, N. Y.—The following contract was let March 20, 1899, to Mulderry Bros. for brick paving, curbing, etc., in Rose St.: Vitrified brick, 990 yds., $1.67; straight curb, 585 ft., 50 cts.; circular curb, 77 ft., 80 cts.; relaying on concrete, 5 yds., $1.80; curb relaid on concrete, 5 ft., 40 cts.; new vitrified brick for sidewalk, 3,450 ft., 9 cts.; 5 ft. flags, 976 ft., 16 cts.; relaying, 2,350 ft., 3 cts.; 6-in. pipe, 200 ft., 40 cts.; 6-in. bends, 40, each 38 cts.; days' labor pounding backfill of trench, 34, $1.50 a day; 12-in. vitrified pipe, 270 ft., 75 cts.; removing old sewer, 300 ft., 42 cts.; 12-in. Y-branches, 20, each $2.25; manhole, $35.00; lamphole, $12.50; days to complete at $5 a day, 8; total, $3,162.76.

BRICK PAVING.—Shamokin, Pa.—The following bids were received March 21 for brick paving in Market and Spruce Sts.; Market St, 12,255 yds.:

KELLY & JONES, Pittsburg, have recently sent two large orders of wrought-iron pipe to Peru, and have an order for 20,000 pieces of fittings for Tokio, Japan.

THE AMERICAN BLOWER CO., Detroit, has orders for fans and hot blast apparatus for brick and cement drying in Moscow and Vielaia, Russia, and Antwerp, Belgium.

M. J. DRUMMOND & CO., 192 Broadway, New York, report recent sales of cast-iron pipe for shipment to Stockholm and Copenhagen. Both foundries are unusually busy.

THE ALMA PORTLAND CEMENT CO., Jackson, Ohio, has increased its capital stock from $50,000 to $700,000. C. K. Davis is president and F. D. Ewing secretary of the company.

Bids Received at Shamokin, Pa., March 21, 1899, for Brick Paving in Market St.

Items.	C. F. Stauffer.	Bolter, Glover & Co.	Coryell Constn Co.	W. E. Kearney.	J. W. Fritchie.	D. E. Malone.	Smith & Campion.	A. J. Stroh & Co.	M. P. Quinn.	D. D. Heim	D. D. Heim	Alcatraz Paving Co.
New curb	$0.75	$0.59	$0.65	$0.58	$0.60	$0.80	$0.73	$0.55	$0.57	$0.55	$0.55	$0.60
Old curb	.40	.21	.20	.20	.18	.08	.14	.12	.12	.18	.18	.20
Repair openings	...	2.95	2.50	2.30	2.40	2.00	...	1.80	2.75	2.55	2.55	2.50
Canton block	...	2.00	1.86	...	2.10	...	...	1.81	...	...	...	1.77
Canton brick	...	1.75	1.82	...	...	...	...	1.74	...	...	...	1.75
Guise block	...	1.65	1.54	...	...	...	1.64	1.60	1.77	...	...	1.47
Guise brick	...	1.64	1.53	...	...	...	1.63	1.59	1.72	...	...	1.47
Montella brick	1.84	*1.75	1.62	...	1.30	...	1.71	1.67	...	*1.70	*1.69	1.565
Clearfield brick	1.80	...	†1.68	...	...	1.70	1.75	...	1.77	...	...	1.58
Clearfield block	...	...	1.68	...	...	1.70	1.75	1.65	1.77	1.75	1.69	1.58
Mack wire brick	1.95	...	1.86	...	...	...	1.85	1.72	1.87	...	...	1.68
" repressed brick	...	...	1.75	...	...	...	1.96	1.73	1.95	...	...	1.77
" repressed block	2.01	2.04	1.77	1.95	...	1.75	1.86	1.74	1.89	1.85	1.80	1.71
" wire block	...	1.87	1.69	...	...	...	1.80	1.69	1.87	...	...	1.65
Porter No. 1	1.96	1.84	1.70	...	1.80	...	1.78	1.68	1.81	...	...	1.62
" No. 2.	...	1.79	...	...	...	...	1.75	1.62	1.77	...	...	1.58
" repressed brick	...	1.90	1.76	...	...	...	1.84	1.73	1.89	...	...	1.66
" repressed block	2.01	1.91	1.77	...	...	1.72	1.85	1.74	1.90	...	...	1.69

*Montella block. †Clearfield repressed brick.

The bids for the 8,291 sq. yds. on Spruce St. were in most cases the same as those on the Market St. work, the bidders for the Spruce St. work being the Coryell Construction Co., W. E. Kearney, J. W. Fritchie, D. D. Heim and the Alcatraz company. The contract has been let to the Alcatraz company, Philadelphia, at $1.56½ a yd. for Montella brick.

BRICK PAVING, ETC.—Kokomo, Ind.—C. R. Ford, Cy. Clk., writes us that the following was let March 13, 1899, for brick paving and curbing: Yager & Dickson, Danville, Ill., Poston block, crushed stone and stone dust, foundation and cement filler, $1.28 a yd.; Parkhurst combined curb and gutter, 74½ cts. a lin. ft.; catchbasins, $18 each; 10-in. sewer connection, 39 cts. a lin. ft.; total, $20,049. The other bidders were as follows: Capitol Paving & Construction Co., Indianapolis, Ind; Gaddis, Dingle & Minnick, New Castle, Ind.; Pfaff, Ringwald & Smith, Chillicothe, O.; Duncan & Scott, Kokomo, Ind.; Hipskind & Bridges, Wabash, Ind.; J. A. Foster & Co., Attica, Ind.; W. W. Hatch & Son, Goshen, Ind.; McGlynn & Grace, Kokomo, Ind.; Daniel Foley, Indianapolis, Ind., and Bowlin & Hadley, Tipton, Ind.

PAVING.—Sioux City, Ia.—J. M. Lewis, Acting Cy. Engr., informs us that the following bids were received March 21 for asphalt and brick paving on 6th St.:

THE WARREN FOUNDRY & MACHINE CO., New York, has recently shipped 400 tons of cast-iron water pipe to Australia, and 2,000 tons are being shipped to Santiago, Cuba.

THE BROWN HOISTING & CONVEYING MACHINE CO., Cleveland, is reported to have a $500,000 contract for an ore unloading and storage plant for a furnace company at Marinpol, South Russia.

THE BASS FOUNDRY & MACHINE WORKS, Fort Wayne, Ind., has just completed a shipment of four large horizontal tubular boilers for Durango, Mex., where they will be utilized in electric plants.

THE BUFFALO FORGE CO., Buffalo, N. Y., has changed its New York office from the Havemeyer Building to more commodious headquarters, rooms 114 and 115 in the Taylor Building, 39 Cortlandt St.

THE BALDWIN LOCOMOTIVE WORKS, Philadelphia, has a contract for ten locomotives for the French government. This contract is said to be the first that France has placed in a foreign country for engines.

THE CASE MFG. CO., Columbus, O., has shipped a 15-ton electric traveling crane to St. Petersburg; also two 30-ton three-motor electric traveling cranes for use in the government power station at Sydney, Australia.

Bids Received at Iowa City, Ia., March 21, 1899, for Asphalt and Brick Paving on 6th St.

Quantities and items.	Asphalt, 7,500 yds. on 6-in. concrete foundation. B. Sheppard & Co., Kansas City.	Asphalt, 7,500 yds. on 6-in. concrete foundation. Barber Asp. P'v'g. Co.	Brick paving, 19,000 yds. on 6-in. concrete foundation with sand filler. E. J. Hanlon, Sioux City.	Brick paving, 19,000 yds. on 6-in. concrete foundation with sand filler. M. L. Flinn, Sioux City.	Brick paving, 19,000 yds. on 6-in. concrete foundation with sand filler. Hansen Bros., Sioux City.
Paving per sq. yd., 7,500 sq. yds.	$2.31½	$2.24	$1.69	$1.59½	$1.69¼
Extra grading, 1,000 ft. haul, a cu. yd.	.29	.30	.25	.25	.25
Over haul, per 100 ft., a cu. yd.	.02	.01	.02	.02	.02
Extra concrete, a sq. yd.	6.50	6.00	4.00	4.00	4.00
" gravel, a cu. yd.	1.75	1.50	1.50	1.50	2.00
" broken stone, a cu. yd.	2.00	2.50	3.00	3.00	2.75
" sand, a cu. yd.	1.00	1.30	1.50	1.50	1.50
Resetting old curb, a lin. ft.	.08½	.08	.06½	.06½	.07
New curb, a lin. ft.	.64½	.64	.60	.54	.60
Drain tile, a lin. ft.	.04	.05	.08	.07	.06

WIRE.—Washington, D. C.—The following bids were received March 23, 1899, for furnishing the chief signal officer with wire: Safety Insulated Wire & Cable Co., New York, outside twisted, f. o. b. New York or Washington, $91.80; inside twisted, $56.50; single, leading in, $48.80. New York Insulated Wire Co., New York, outside twisted, f. o. b. New York, $89.76; Washington, $91.08; single, leading in, f. o. b. New York, $409.20; Washington, $414.48. Western Electric Co., Chicago, outside twisted, f. o. b. New York or Washington, $97.80; inside, $56.50; single, leading in, $48.80. J. H. Bunnell & Co., New York, outside, f. o. b. New York, $114.84; Washington, $116.16; inside, New York, $79.20; Washington, $80.52; single, New York, $55.44; Washington, $56.76. Washburn & Moen Mfg. Co., Worcester, Mass., outside, f. o. b. New York, $133.50; Washington, $113.50; inside, New York, $98; Washington, $98; single, New York or Washington, $74.50.

GRADING.—Washington, D.C.—The District Commissioners have received the following bids for grading L St., between North Capitol and 8th Sts., N.W.: John Jacoby, grading, 22½ cts.; laying cobble gutters, 17 cts. a yd; setting curb, 10 cts. a yd.; loading and hauling macadam, 24¾ cts. a cu. yd. James Frawley, grading, 23¾ cts.; laying cobble gutters, 17 cts; setting curb, 18⅛ cts.; loading and hauling macadam, 32⅛ cts. Washington Asphalt Block & Tile Co., grading, 25 cts.; laying cobble gutters, 25 cts.; setting curb, 18 cts.; loading and hauling macadam, 30 cts. Andrew Gleason, grading, 22 cts.; laying cobble gutters, 18 cts.; setting curb, 13 cts.; loading and hauling macadam, 40 cts.

INDUSTRIAL NOTES.

THE CONTINENTAL FILTER CO., New York, has removed its offices from 44 Wall St. to the Mills Building, 35 Wall St.

THE SPRAGUE ELECTRIC CO., New York, has the contract for equipping the new court house in Baltimore with elevators.

THE Q. & C. CO., Chicago, reports a large shipment of pneumatic tools to St. Petersburg, Russia, where an agency has been established.

THE WEBER RAILWAY JOINT MFG. CO., New York, has just made a large shipment to Belgium of insulated joints for use on the Belgian State railways.

THE RITER-CONLEY MFG. CO., Pittsburg, has the contract for a new power house to be used by the Bristol Tramways & Carriage Co., Ltd., Bristol, England, reported to cost about $100,000. The company has just completed a similar contract for the United Tramway Co., Dublin.

THE PENCOYD IRON WORKS, Philadelphia, has just sent a force of men to Africa to erect a bridge across the Atbara River, in the Soudan, near Khartoum. The seven spans of the bridge, with a total length of 1,100 ft., have already been shipped.

JAMES LEFFEL & CO., Springfield, Ohio, report the following shipments: Two high-pressure boilers to Brazil; saw-mill machinery and four Samson water wheels, to Helsingfors, on the Gulf of Finland; also some water wheels for Nikolaiesk, Eastern Siberia.

THE CLEVELAND CAR CO., 148 to 152 Scranton Ave., Cleveland, Ohio, was recently organized to build light steel cars, portable railways, rolling stock and accesories. The company reports orders amounting to over $5,000 during the first month. Mr. J. W. Hornsey is Manager of the company.

THE EDWARD P. ALLIS CO., Milwaukee, is building another large engine for the Metropolitan St. Ry. Co., New York, making the tenth engine that it has furnished this railway. The company has also closed a contract for the milling machinery, engines, etc., for a 500-bbl. flour mill in Shanghai, China.

THE RUGGLES-COLES ENGINEERING CO., New York, has recently shipped several large iron tanks, channel irons, beams, etc., to Monterey, Mex.; horizontal tubular boilers, valued at $6,000, to Progresso, Mex.; and a number of digesters to Caracas, Venezuela. A sand dryer, valued at $7,000, is about to be shipped to Toronto, Canada.

THE LOMBARD WATER-WHEEL GOVERNOR CO., Boston, has received an order for three additional governors for the plant of the St. Anthony Falls Water Power Co., of Minneapolis. The above governors are for the three additional units of four Victor turbines each which are now to be installed. This will make in all ten Lombard governors in this plant, regulating 40 water wheels.

MERCHANT & CO., Inc., Philadelphia, have recently received an order from the War Department for 786 of their galvanized "Star" ventilators, for use on the officers' quarters and barracks to be erected at Havana and Matanzas, Cuba. There will be 587 ventilators of 24 ins. diameter, and 199 of 14-ins. diameter. Within the last few months Merchant & Co. have supplied 500 18-in. ventilators for the new government hospitals at Fortress Monroe and Savannah.

THE GLAMORGAN PIPE & FOUNDRY CO., Lynchburg, Va., has sold its plant to a New York syndicate headed by M. J. Drummond, 192 Broadway. Others interested are: David McClure, of Turner, McClure & Rolston; V. P. Travers, Pres. Standard Rope & Twine Co.; Wm. H. Geishenen, Pres. Garfield National Bank. Mr. H. E. McWane, Lynchburg, President and Manager, is also interested in the new company and continues in his present office. The works are being operated to their utmost capacity.

THE UNION STEAM PUMP CO., of Battle Creek, Mich., is extending its works, the old offices being added on to the shops, and an extension being made to the machine shop. The new office building is of brick, two stories high. The test room will be at the end of the shop near the railway tracks, so that completed pumps can be conveniently tested before shipment. The boilers have been fitted with the "American" mechanical stoker, and the plant is said to be now practically smokeless.

THE BULLOCK ELECTRIC MFG. CO., of Cincinnati, O., informs us that on March 6 Judge Lacombe, of the U. S. Circuit Court, Southern District of New York, refused to grant an injunction applied for by the Thomson-Houston Electric Co. (owned and controlled by the General Electric Co.) to enjoin the Bullock Electric Co. from using a magnetic blow-out with controller, which it claimed infringed its patents. The Bullock Co. states that it has always used a blow-out magnet in its controllers, and will continue to do so.

THE WATERTOWN ENGINE CO., Watertown, N. Y., has recently installed four high-speed engines in the New York State Hospital at Ogdensburg. The company reports that the results are especially satisfactory when the engine is running at much less than its rated horse power. For example: This engine, whose normal load is 180 HP., has at times been put to do the work of only 75 HP., and this it has done with less steam consumption than a standard high-speed engine of good make of 80 HP., the four-valve Watertown engine at less than 50% of its rated load showing better economy than a standard high-speed engine at nearly or quite its full load.

C. O. BARTLETT & CO., 43 Center St., Cleveland, O., manufacturers of mill and elevating and conveying machinery, have a contract to build and equip a grain elevator for the Sheets Bros. Grain Elevator Co., Cleveland, of 50,000 bu. capacity. It will be located on the Cleveland, Canton & Southern R. R. and will be equipped with 50-HP. boiler and engine, cleaning machinery, including oat-clippers, and machinery for loading and unloading all kinds of grain. The building will cost about $18,000 and will be completed about Aug. 15. The former company has also just shipped the machinery for a 100-bbl. a day oatmeal mill for the Stromsburg Cereal Co., Stromsburg, Neb.

NEW COMPANIES.—Wahnita Copper Mining Co., Trenton, N. J.; $1,000,000; Frederick H. Clark, Jas. H. Fuller, and Henry F. Whitney, all of Boston, Mass.

Centrifugal Flying Machine Co., San Francisco, Cal.; $10,000; J. C. Holloway, H. P. Foley, J. Trounson.

Northern Mfg. Co., Camden, N. J.; $150,000; to manufacture coke, gas, etc.; George H. B. Martin, William H. Jolley, John Walmsley.

Bicycle Grindstone Co., Chicago, Ill.; $50,000; to carry on a manufacturing, mercantile, quarry, foundry and planing mill business; J. S. Fletcher, Noah Cornfield.

New England Foundry & Machine Co., Jersey City, N. J.; $100,000; to manufacture special machinery, tools, etc.; Charles F. Hoyt, New York; Charles E. Seldon, Middletown; R. H. Desmond, Cranford, N. J.

American Car & Foundry Co., Jersey City, N. J.; $60,000,000; to manufacture railway cars, etc.; Adrian H. Larkin, Francis L. Patton, Jr., William H. Fain.

Cleveland Crane & Car Co., Cleveland, O.; $50,000; to manufacture cranes of all kinds, cars, etc.; George A. Armstrong, Charles E. Thomas, J. W. Herschelman.

Reynolds Electric Street Cleaning Car Co., Phoenix, Ariz.; $50,000; to acquire patents for and manufacture street cleaning devices; A. Jackson Reynolds, Kendall Hunt, Edward L. Sierney.

National Automatic Weighing Machine Co., Mount Kisco, N. Y.; $500,000; to manufacture and sell coin-operated machines; William H. Neale, Mount Kisco; E. J. Patterson, Plainfield; John F. Eagle, New York.

Chase Electric Construction Co., Plainfield, N. J.; $500,000; to manufacture and maintain various electrical apparatus, etc.; Albert Chase, Louis Chase.

Bay State Construction Co., Greenfield, Mass.; $1,000; general contracting business; John A. Taggart, Daniel P. Abercrombie, C. W. Clapp.

Baltimore Bolt & Iron Works, Baltimore, Md.; $5,000; to manufacture bolts and plates; W. D. Jameson, Charles Rich, D. Worthington.

Smithville Telephone Co., Smithville, Tenn.; $1,000; to construct and operate a telephone line; R. L. Cantrell, T. J. Patten, W. W. Parker.

Florence Mining Co., Trenton, N. J.; $3,000,000; Charles F. Sennon, Staten Island; T. E. Farrell, New York; T. F. Charles, Jersey City.

Commercial Cable Co. of Cuba, Jersey City, N. J.; $500,000; to construct and operate an electric telegraph between Cuba and the United States; Clarence H. Mackay, George G. Ward, Albert B. Chandler.

United States Tube Co., Jersey City, N. J.; $75,000; to manufacture all tubular and other products of iron and steel; William P. Chapman, Jr., New York; Albert G. Ridley, Brooklyn; Francis D. Pollak, Summit.

National Pneumatic Tool Co., Camden, N. J.; $200,000; to manufacture tools, machinery, etc.; J. B. Longacre, Glenn B. Harris, Samuel F. Wilson.

Automatic Combination Machine Co., Jersey City, N. J.; $50,000; to manufacture automatic devices of all kinds; August Bundt, Yonkers, N. Y.; Ernest Boening, New York; Henry Salzwedel, Brooklyn, N. Y.

Mahoney Mfg. Co., Troy, N. Y.; $75,000; general foundry business; Michael Mahoney, Frederick M. Mahoney.

Hercules Wave Motor Co., San Francisco, Cal.; $1,000,000, commencing at $250; to manufacture and sell wave motors; A. R. Exley, J. Crothers, W. McDonald.

Vinton Telephone Co., Des Moines, Ia.; $7,000; F. G. Ray, G. M. Gilchrist, A. S. Chadbourne.

Boston Sheet Metal Mfg. Co., Jersey City, N. J.; $100,000; to manufacture corrugated iron and steel; Harlan R. Lloyd, Kenneth K. McLaren, Harry W. Meers.

Mohawk Contracting Co., New York; $5,000; C. F. Mairs, New York; W. E. Flood, Albert Key, Brooklyn, N. Y.

Johnson & Morton, Utica, N. Y.; $10,000; to manufacture electrical machinery; M. H. Johnson, W. H. Morton

Harrison Telephone Toll Line, Owensboro, Ky.; $3,000; J. W. Carter, Owensboro; T. C. Adair, Fordsville.

Dittman Powder & Chemical Co., Howell township, Monmouth county, N. J.; $100,000; to manufacture smokeless powder, guncotton, etc.; Maria W. Dittman, Carl H. Dittman, New York; Pat. J. Cooney, Jersey City.

Rochester Electric Motor Co., Rochester, N. Y.; $10,000; John Beckley, Edw. F. Davison, Rochester; Frederick C. Kimmel, Greece, N. Y.

Universal Roller Bearing Co., Augusta, Me.; $500,000; general machinery business; A. Y. Small, Brockton, Mass.; E. K. Milliken, Portland, Me.

Security Mining & Power Co., Augusta, Me.; $2,000,000; F. C. Wilson, Providence, R. I.; F. B. Rice, Somerville, Mass.

Allegheny Construction & Equipment Co., Martinsburg, W. Va.; $1,000,000, commencing with $500; general construction work; Griffith C. Callahan, Spencer C. Hazard, Frank M. McCafferty, Philadelphia, Pa.

Columbia Refrigerator Co., Trenton, N. J.; $300,000; to manufacture railway refrigerating cars, etc.; Allen Carpenter, New York; William C. Prime, Yonkers.

United Pneumatic Fire Alarm Telegraph Co., Trenton, N. J.; $100,000; Michael C. Bouvier, Albert Goldstein, New York; Bernard M. Ewing, Wyckoff, N. J.

H. P. Read Lead Works, Brooklyn, N. Y.; $30,000; C. V. Driggs, Howard A. James, J. S. Buzzini.

Brien Heater Co., Hoosick Falls, N. Y.; $5,000; Henry W. Stone, James T. Brien, T. R. Brien.

Reliance Gauge Co., Cleveland, Ohio; $25,000; machinery and tools; M. F. Bramley, Herman P. Zapp.

New Jersey Steam Co., Trenton, N. J.; $125,000; William J. Baldwin, Edgar M. Arnold, New York; Edward Maher, Newark.

Union Telephone Co., Alma, Mich.; $25,000; G. S. Aldrich, St. Louis, Mo.; C. F. Brown, Alma, Mich.

Erie & Buffalo Steamboat Co., Erie, Pa.; $200,000, commencing with $20,000; Wm. H. McFall, Sr., Detroit, Mich.; Edward D. Carter, Erie, Pa.; Eugene McFall, Put-in-Bay, Ohio.

Continental Cement Co., Trenton, N. J.; $10,000,000, commencing with $5,000,000; ex-Mayor Thomas F. Gilroy, New York; Ralph Peverly, William H. Clark, James C. Young, Jersey City.

Washington Copper Mining & Smelting Co. of Eastport, Augusta, Me.; $800,000, commencing with $250,085; Paul Clogstone, Spokane, Wash.; W. F. Cappen, H. C. Buxton, Eastport, Me.

Palmer Steel & Iron Co., Chicago, Ill.; $100,000; John H. Palmer, John D. Briggs, Walter I. Moody.

Dearborn Lead & Zinc Mining Co., Chicago, Ill.; $15,000; Max M. Wolworth, J. G. Hoagland, C. H. Jackson.

American Brick Co., Trenton, N. J.; $10,000,000; Oakleigh Thorne, Milbrook, N. Y.; Edward Thorne, Babylon, L. I.; Raymond C. Knox, New York.

Park Steel Co., Trenton, N. J.; $10,000,000; George D. Hallock, Plainfield, N. J.; Park E. Bell, Chas. A. Ramsey.

United States Construction Co., Camden, N. J.; $100,000; general construction business; Richard G. Loos, Wm. H. Carl, Wm. H. Snyder, Camden, N. J.

Phillips Rock Drill Co., Jersey City, N. J.; $300,000; Thos. H. Phillips, Philadelphia, Pa.; Charles G. Robinson, Carwood, N. J.; Bertram C. Smith, Brooklyn, N. Y.

Santa Rita Mining Co., New York; $25,000; to operate mines in Arizona; John T. Kelly, E. J. Henning.

Franke-Jennen Fireproof Flooring Co., New York, $50,000; Ernest Franke, Terrenez J. Jennen, New York; Niels Poulson, Michael Egen, Brooklyn, N. Y.

Elmira District Steam Heating Co., Elmira, N. Y.; $10,000, commencing with $500; John A. Reynolds, William S. McCord, Chas. B. Swartwood, Elmira, N. Y.

National Concrete Fireproofing Co., the Corporation Trust Co.'s Bldg., Jersey City, N. J.; $100,000; J. P. Wagner, J. H. Libby, F. C. Caine, Cleveland, O.

Whitney Safety Fire Arms Co., Jersey City, N. J.; $500,000; G. Burslem, W. H. Whitney, New York; A. T. Merritt, Hackensack, N. J..

Bailey Automatic Bicycle Brake Co., Jersey City, N. J.; $150,000; J. R. Lane, J. H. Grant, F. V. Kusserow.

Paterson Crushed Stone Co., Paterson, N. J.; $100,000; J. S. Sowerbutt, W. K. Berry, F. W. Schimdt.

Thomas Coxe Machinery Co., Little Rock, Ark.; $25,000; Thos. Coxe, Bentley Coxe, Chas. C. Conlee.

American Brass Co., Waterbury, Conn.; $20,000,000; C. F. Brooker, C. P. Goss, J. S. Elton.

Lanyon Zinc Co., Trenton, N. J.; $3,000,000; Benjamin Haskell, Bloomfield, N.J.; Martin W. Littleton, Brooklyn.

Farmers' & Traders' Telephone Co., Des Moines, Ia.; $3,000; Ernie Lyon, R. W. Moore, J. B. Krout.

Pneumatic Supply & Equipment Co., New York; $25,000, commencing with $25,000; John W. Duistley, W. P. Pressinger, E. B. Gallaher, New York.

Becker-Brainherd Milling Machinery Co., Portland, Me.; $50,000, commencing with $300; Harry P. Sweetsir, Portland, Me.; Joseph Warren, Boston, Mass.

People's Telephone Co., Decatur, Miss.; $5,000; E. B. Partin, T. N. McMullan, F. O. Horne.

Milford Telephone Co., New York; $1,000; to operate a system of telephone communication from Oneonta to Richfield Springs, Otsego county; George Whitney; C. B. Kniskern, C. E. Carr, Milford, N. Y.

Lavigne Automatic Mfg. Co., Paterson, N. J.; $150,000; to manufacture machinery and tools; Benjamin Eastwood, Paterson, N.J.; John J. Tower, New York; Wm. H. Cole.

Continental Compressed Air & Power Co., Philadelphia, Pa.; $5,000,000, commencing with $500; to acquire water powers throughout the United States and operate plants under the Taylor patents; John A. Inslee, William Gehnam, Joseph Weiss.

Radford Telephone Co., Pulaski, Va.; $5,000; D. D. Hull, Jr.; B. Langhon, George M. Holstein.

International Vehicle Co., of New York city and Charleston, W. Va.; $5,000,000; all kinds of automobiles wi.. be made and operated in the large cities of the country; W. P. and C. W. Hatch, H. C. Underwood, H. F. Adams.

Foxboro Foundry Co., Portland, Me.; $50,000, commencing with $300; to manufacture and deal in all kinds of castings, machinery, etc.; Berry F. Boyden, Otis T. Pettee.

United States Fireproof Wood Co., Camden, N. J.; $1,000,000, commencing with $1,000; the objects of the corporation are to treat wood and to make same non-inflammable; John A. Berry, Robt. J. Bell, Albert J. County, Philadelphia, Pa.

Gleason Mfg. Co., Camden, N. J.; $100,000, commencing with $1,000; all kinds of machinery; Edw. D. Gleason, Milton L. Ritter, Stephen Hasenbuhler, Jr.

Constableville & West Leyden Telephone Co., of West Leyden, Lewis county, Albany, N. Y.; $3,000; Benedict Gautier, S. C. Capron, Leyden; Frederic Myers and Elizabeth Myers, West Leyden.

East Coast Telephone Co., Palm Beach, Fla.; Pres., Maj. N. S. Boynton; Treas., M. B. Lyman; Secy., P. H. Loud, Jr.

Winston Electric Construction Co., Richmond, Va.; $5,000; Charles R. Winston, Pres.; Hill Montague, Secy.

Maryland Telephone Co., Baltimore, Md.; $1,250,000; Henry A. Parr, George R. Webb, Pinkney W. Wilkinson.

State Mechanical Co., Chicago, Ill.; $2,500; L. J. Otterborne, W. L. O'Day, R. L. Brown.

Standard Iron & Metal Co., Chicago, Ill.; $2,500; J. O. Crane, G. Laughhemy, John Stelk.

California Paving Co., San Francisco, Cal.; $250,000; Jos. Sheerer, Thomas Ganeard, Wendell Easton.

American Radiator Co., Trenton, N. J.; $10,000,000; to manufacture and deal in radiators, boilers and other heating apparatus; James B. Dill, New York; Lewis Bruch, Chicago; Howard K. Wood, East Orange, N. J.

Gold Mountain Mining Co., Yuma, Ariz.; $1,000,000; to do a general mining business; Walter Allen, D. W. Campbell, A. T. Stewart.

East Jersey Electric Co., Trenton, N. J.; to manufacture and deal in electricity, light, heat and power of all kinds, including compressed air; C. F. Johnson, New York; S. H. Taylor, Philadelphia; J. P. Cooper, Rutherford, N. J.

Dupage County Telephone Co., Wheaton, Ill.; $10,000; Margaret I. Isgrig, Henry M. Fisk, Frank Seward.

Dearborn Railway Equipment Co., Chicago, Ill.; $2,500; to manufacture railway supplies; Thomas F. Sheridan, Thomas B. McGregor, Belle W. Barry.

Standard Electric Co., San Francisco, Cal.; $5,000,000; general electric light and power business; John S. Drum, F. H. Dam, M. F. Vandall.

Maxim Co., Pleasant Mount, N. J.; $500; to manufacture and sell boilers, engines and machinery; Allan Stirling, John B. Smith, Thomas Payne.

Carbondale Machine Co., Carbondale, Pa.; $50,000, commencing with $5,000; to manufacture machinery; A. P. Trautwine, N. H. Hiller, G. A. Singer.

Gaffney Brick Co., Winchester, Ky.; $75,000; to manufacture and sell brick, tiling, drains, etc.; John Gaffney, St. Louis, Mo.; G. W. Holloway, T. G. Stuart.

Ransom Gas Machine Co. of New York, Oneida, N. Y.; $40,000, commencing with $30,000; to manufacture machinery for producing gas; Charles E. Bemick, John P. Dorrance, Edwin P. Chapman, Jr.

Asphalt Roofing Co., St. Louis, Mo.; $5,000; Robert J. Redick, George T. Riddle, William L. Sleumer.

Ozark Construction Co., Little Rock, Ark.; $50,000; Pres., W. R. Felker; J. M. Bayless, J. E. Felker, Felker.

Municipal Construction Co., Chicago, Ill.; $20,000; construction and contracting business; W. T. Hapeman, Daniel W. Fishel, William A. Jennings.

New Hope Telephone Co., New Hope, Ky.; $1,000; to erect and operate telephone; F. W. Hogan, New Hope; T. P. Hogan, E. Miles Hogan, Louisville, Ky.

SEWERAGE.

CONCORD, MASS., March 30, 1899.

Sealed proposals for completing the construction of a system of public sewers for the Town of Concord will be received at the office of the Engineer, 89 State St., Boston, Mass., up to Monday noon, April, 10, 1899.

The approximate amount of work to be done is as follows:

To lay 14,100 ft. sewer pipe of 6-in. to 12-in. diameter.
421 " 8-in. and 10-in. river crossing pipe.
390 cu. yds. masonry.
4,700 ft. of 10-in. cast-iron forcemain.

Proposals for doing the work must be made upon blanks furnished for the purpose, and must be accompanied by certified check in the sum of five hundred ($500) dollars, made payable to the Sewer Commissioners of the Town of Concord.

A bond in the sum of four thousand ($4,000) dollars, with two or more sureties, or with a surety company as surety, will be required for the faithful performance of the contract. The sureties must be satisfactory to the Sewer Commissioners.

Plans may be seen and printed form of proposals, specifications and contract obtained from the Engineer, at 89 State St., Boston, Mass.

The right is reserved to the Sewer Commissioners to reject any or all proposals, or to accept the one deemed by them for the best interest of the town.

WILLIAM WHEELER,
HENRY J. HOSMER,
WOODWARD HUDSON,
Sewer Commissioners.

LEONARD METCALF, Engineer. 13-1t

PAVING.

PETERSBURG, VA., March 22, 1899.

Proposals will be received by the Street Committee of Petersburg, Va., until 12 o'clock m., on the 15th day of April, 1899, for laying about 2,500 square yards of granite blocks, and 12,300 square yards of vitrified brick, on certain streets in the City of Petersburg, Virginia.

Plans and specifications and forms of contract and proposals, for the above classes of work, are on file at the office of the City Engineer, where they can be seen on application. The committee reserves the right to reject any or all bids.

W. H. TALLEY,
13-1t Chairman Street Committee.

U. S. ENGINEER OFFICE, Army Building, New York, N.Y., March 25, 1899.—Sealed proposals for the purchase and removal of 235,000 cubic yards, more or less, of broken stone, owned by the United States, and stored on land near Spuyten Duyvil, New York city, will be received here until 12 m., April 28, 1899, and then publicly opened. Information furnished on application. H. M. ADAMS, Major, Engrs. 13-4t

POSTPONEMENT NOTICE.

WATER-WORKS EXTENSION.

BUTTE, MONTANA.

Sealed proposals will be received at the office of the BUTTE CITY WATER COMPANY, BUTTE, MONTANA, until Wednesday, April 19th, 1899, at noon, for furnishing the material and labor necessary for the construction of the following pipe line:

Approximately, 50,000 lineal feet of twenty-four (24) inch banded stave pipe to withstand pressures varying from ten to one hundred and fifty feet head.

Approximately, 16,000 lineal feet of twenty-six (26) inch riveted steel pipe to withstand pressures varying between one hundred and fifty feet to six hundred feet head.

Also six (6) twenty-four (24) inch gate valves with flange joints and four (4) inch by-passes.

Also necessary special castings for connections and blow-offs.

Further information can be obtained at the office of the Company in Butte, Montana.

Bids upon the whole or any part will be considered, and the right to reject any or all bids is reserved.

EUGENE CARROLL,
13-1t Chief Engineer.

STEEL HIGHWAY BRIDGE.

OFFICE OF COMMISSIONER OF PUBLIC WORKS, CITY HALL, PROVIDENCE, R. I., March 28, 1899.

Sealed proposals addressed to the Commissioner of Public Works, City Hall, Providence, R. I., will be received until 11 o'clock a. m., Wednesday, April 12, 1899, for furnishing and erecting a steel highway bridge over the Moshassuck River at Mill Street, in the City of Providence.

Plans and specifications may be seen at the City Engineer's Office, City Hall, where blank forms of contract, proposal and bonds may be obtained for intending bidders only.

Each proposal must be accompanied by a bond or certified check for one thousand ($1,000) dollars.

The right to reject any or all bids is reserved.

ROBERT E. SMITH,
13-2t Commissioner of Public Works.

U. S. ENGINEER OFFICE, Army Building, New York, N.Y., March 25, 1899.—Sealed proposals for DREDGING East Channel, New York Harbor, will be received here until 12 m., April 24, 1899, and then publicly opened. Information furnished on application. H. M. ADAMS, Major, Engrs. 13-4t

U.S. ENGINEER OFFICE, 185 Euclid Ave., Cleveland, O., March 27, 1899.—Sealed proposals for DREDGING in Cleveland Harbor, O., will be received here until 2 o'clock p.m., Standard time, Apr. 26, 1899, and then publicly opened. Information furnished on application. JARED A. SMITH, Col., Engrs. 13-2t

SANITARY DISTRICT OF CHICAGO.

TO CONTRACTORS.

Sealed proposals addressed to the Sanitary District of Chicago for "One Railroad Bridge crossing the Main Channel of the Sanitary District" will be received by the Clerk of said Sanitary District at Room 1110 Security Building, Chicago, Illinois, until 12 m. (Standard time) of Wednesday, the 10th day of May, A.D., 1899, and will be publicly opened by the said Board of Trustees at its regular meeting held on that day.

The Railroad Bridge for which said tenders are invited is a swing four-track structure, having a span of 334 feet 6 inches, on the line of the Belt Railway of Chicago crossing the Main Channel at the east end of Section "K."

The work for which said tenders are invited includes the supplying of all materials for Sub and Superstructures of said bridge, and erecting completely in accordance with plans and specifications furnished by the said Sanitary District of Chicago.

Each bid must be accompanied by a certified check or cash to the amount of three thousand ($3,000) dollars.

Said certified check must be drawn on some responsible bank doing business in the City of Chicago, and be made payable to the order of the Clerk of the Sanitary District of Chicago.

Said amount of three thousand dollars will be held by the Sanitary District until all of the bids for said structure have been canvassed and the contract awarded and signed. The return of said check or cash being conditioned upon the appearance, within ten (10) days after receiving notice of award to him, of the bidder to whom the award of said work shall have been made, with bondsmen, and executing a contract with the Sanitary District for the work so awarded, and giving a bond satisfactory to the said Board of Trustees for the fulfillment of said contract, the amount of said bond to be thirty thousand ($30,000) dollars.

All bids received to be upon blank forms furnished by the Sanitary District.

No bid will be considered unless the party making it shall furnish evidence satisfactory to the Board of Trustees of his ability and experience in this class of work, and that he has sufficient capital to enable him successfully to prosecute the same in case the contract therefor shall be awarded him.

Bidders are required to state in their bids their individual names and places of residence in full.

Design of bridge may be seen and plans and specifications may be obtained at the office of the Chief Engineer of the Sanitary District of Chicago, Room 1010 Security Building, Chicago, Illinois.

Said board of trustees reserves the right to reject any and all bids.

SANITARY DISTRICT OF CHICAGO,
By WILLIAM BOLDENWECK,
Attest: President.
JOSEPH F. HAAS, Clerk.
Chicago, March 8th, A.D., 1899. 13-1t

U. S. ENGINEER OFFICE, 601 18th St., N. W., Washington, D. C., March 27, 1899.—Sealed proposals for reconstruction of PIER No. 4 of Aqueduct Bridge across Potomac River, at Georgetown, D. C., will be received here until 12 m., April 27, 1899, and then publicly opened. Information furnished on application. CHAS. J. ALLEN, Lieut.-Col., Engrs. 13-4t

AIR CYLINDERS, AIR LIFTS, etc.

MONTGOMERY, ALA., March 21, 1899.

Proposals will be received by the undersigned at his office until 12 o'clock noon, Thursday, April 20, for the exchanging of the present Air Cylinders upon the City's Compressor for larger ones, and the application of the Air Lift to three new artesian wells. Specifications for this work can be obtained of G. A. Ellis, Consulting Engineer, at the office of the City Water-Works, 114 Monroe Street. The City reserves the right to reject any and all bids.

R. H. SOMMERVILLE,
13-4t City Treasurer.

U. S. ENGINEER OFFICE, Duluth, Minn., March 16, 1899.—Sealed proposals for furnishing natural cement, Portland cement, broken stone, sand, timber, rubber boots, iron and hardware supplies for CONCRETE SUPERSTRUCTURE to BREAKWATER at Marquette, Mich., will be received here until noon, April 17th, 1899, and then publicly opened. Information furnished on application. CLINTON B. SEARS, Major, Engrs. 12-4t

PROPOSALS TO CLEAN IMPROVED ALLEYS in the District of Columbia.—Office of the Commissioners of the District of Columbia, Washington, D. C., March 25, 1899.—Sealed proposals, endorsed "Proposals to Clean Improved Alleys," will be received at this office until 12 o'clock m., April 10, 1899, to clean the improved alleys in the City of Washington, D.C., as per blank forms of proposals and specifications, copies of which, and all other necessary information, may be obtained at the office of the Superintendent of Street and Alley Cleaning, 464 Louisiana Avenue, N.W., Washington, D. C. A certified check for twelve hundred ($1,200) dollars, or a certificate of the Collector of Taxes, D. C., that said amount has been deposited with him, must accompany each proposal as a guarantee that the bidder will enter into contract if his bid should be accepted. The right to reject any and all bids is reserved. JOHN B. WIGHT, JOHN W. ROSS, LANSING H. BEACH, Commissioners of the District of Columbia. 13-2t

PROPOSALS TO CLEAN UNIMPROVED STREETS AND ALLEYS in the District of Columbia.—Office of the Commissioners of the District of Columbia, Washington, D.C., March 25, 1899.—Sealed proposals, endorsed "Proposals to Clean Unimproved Streets and Alleys," will be received at this office until 12 o'clock m., April 10, 1899, to clean the unimproved streets and alleys in the City of Washington, D. C., as per blank form of proposals and specifications, copies of which and all other necessary information, may be obtained at the office of the Superintendent of Street Cleaning, 464 Louisiana Avenue, N.W., Washington, D. C. A certified check for eighteen hundred ($1,800) dollars, or a certificate of the Collector of Taxes, D. C., that said amount has been deposited with him, must accompany each proposal as a guarantee that the bidder will enter into contract if his bid should be accepted. The right to reject any and all bids is reserved. JOHN B. WIGHT, JOHN W. ROSS, LANSING H. BEACH, Commissioners of the District of Columbia. 13-2t

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